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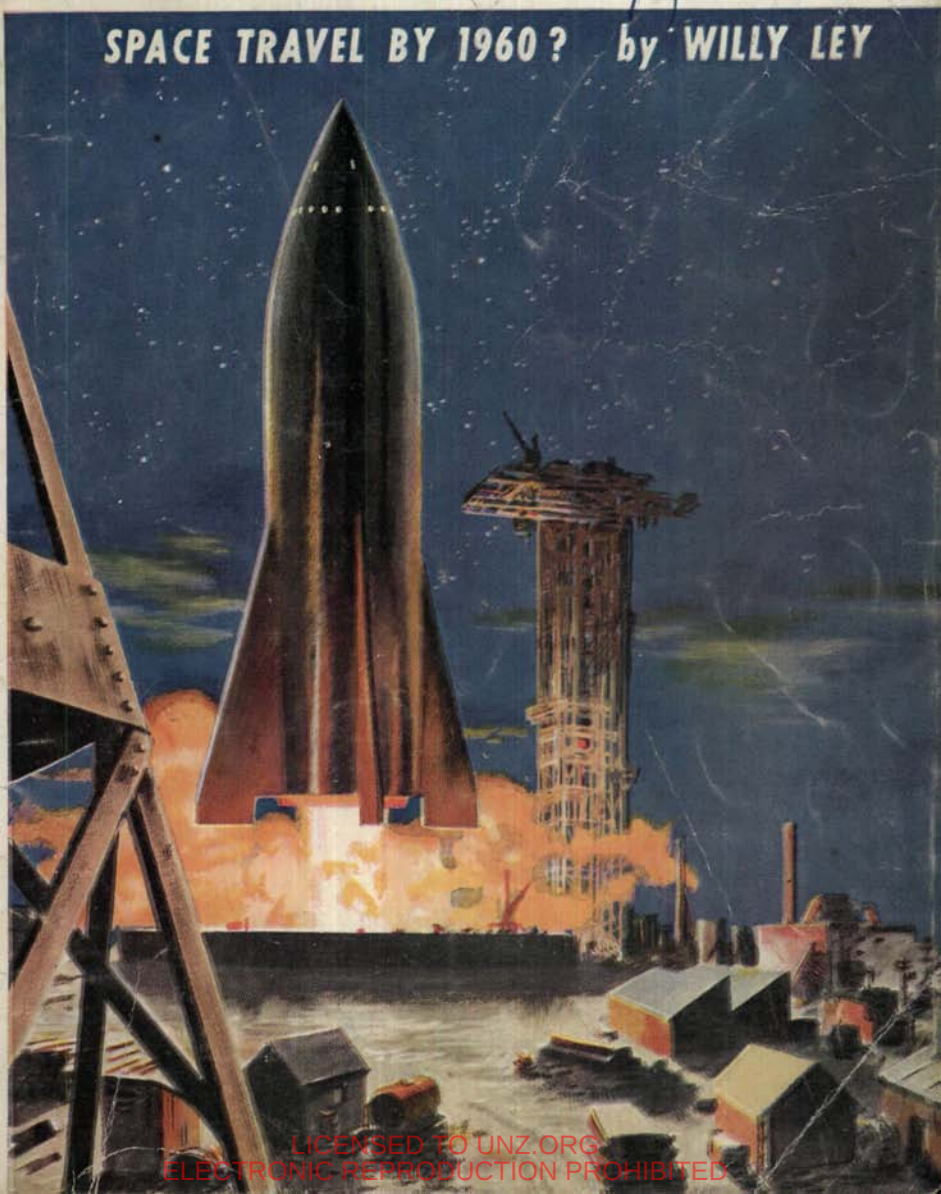

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by WILSON TUCKER

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ON HEROES

READERS often question the heroism of fictional heroes, arguing that people don't behave so heedlessly. If you want the truth, writers sometimes wonder about it, too. We use the flippant cockiness of the American hero, the casual stiff lip of the British, the cerebral bravery of the French, and more recently the grim fortitude, supported by encyclopedic knowledge, of the spaceman, but always afraid of this criticism.

Actually, there is a case for fictional heroism. It just isn't carried far enough, which is true of much of our reasoning and is the purpose behind these editorials. It's not that I believe I have the answers; I'm searching for them, hoping others will be interested and provoked enough to present viewpoints that may advance science fiction.

Anyone who has seen combat knows that the real horror is the anticipation and, afterward, the reaction. The same is true of less obvious heroism — dreading a business or social situation, being forced into it, working it out somehow, and then, if it's a grave one, trembling at the possible errors one made and their consequences.

Here is where fictional heroism is hard to believe. On the basis of our personal experience, we can accept the bravery of people in circumstances they cannot evade or flee. Fear, naturally, is a powerful goad at such times, but not necessarily the fear you might expect. Our most decorated soldier, Audie Murphy, for example, according to his autobiography, was more afraid of social disapproval of any cowardice he might display than of gunfire.

Where fictional heroism becomes improbable is in the lack of expectant dread and later reaction. Used sparingly, both can make characters more real. But they can't be used often. First of all, they halt stories when done without deftness. Next, not everybody suffers anticipation and reaction in the same way. Since this is not a psychological treatise, there's no point going into varieties of behavior in danger; it ranges from fright paralysis to paralyzed fright. The latter is the phenomenon we recognize in fictional heroism, when anxiety is so acute that it must be escaped through action, however reckless.

The situations we read about in stories are extremely unlikely to happen to us. But how would

(*Continued on page* 115)

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DELAY IN

By F. L. WALLACE

An unprovoked, meaningless night attack is terrifying enough on your own home planet, worse on a world across the Galaxy. But the horror is the offer of help that cannot be accepted!

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TRANSIT

Illustrated by SIBLEY

"MUSCLES tense," said Dimanche. "Neural index 1.76, unusually high. Adrenalin squirting through his system. In effect, he's stalking you. Intent: probably assault with a deadly weapon."

"Not interested," said Cassal firmly, his subvocalization inaudible to anyone but Dimanche. "I'm not the victim type. He was standing on the walkway near the brink of the thoroughfare. I'm going back to the habitat hotel and sit tight."

"First you have to get there," Dimanche pointed out. "I mean, is it safe for a stranger to walk through the city?"

"Now that you mention it, no," answered Cassal. He looked around apprehensively. "Where is he?"

"Behind you. At the moment he's pretending interest in a merchandise display."

A native stamped by, eyes brown and incurious. Apparently he was accustomed to the sight of an Earthman standing alone,

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Adam's apple bobbing up and down silently. It was a Godolphian axiom that all travelers were crazy.

Cassal looked up. Not an air taxi in sight; Godolph shut down at dusk. It would be pure luck if he found a taxi before morning. Of course he *could* walk back to the hotel, but was that such a good idea?

A Godolphian city was peculiar. And, though not intended, it was peculiarly suited to certain kinds of violence. A human pedestrian was at a definite disadvantage.

"Correction," said Dimanche. "Not simple assault. He has murder in mind."

"It still doesn't appeal to me," said Cassal. Striving to look unconcerned, he strolled toward the building side of the walkway and stared into the interior of a small cafe. Warm, bright and dry. Inside, he might find safety for a time.

Damn the man who was following him! It would be easy enough to elude him in a normal city. On Godolph, nothing was normal. In an hour the streets would be brightly lighted—for native eyes. A human would consider it dim.

"Why did he choose me?" asked Cassal plaintively. "There must be something he hopes to gain."

"I'm working on it," said Dimanche. "But remember, I have limitations. At short distances I can scan nervous systems, collect and interpret physiological data. I can't read minds. The best I can do is report what a person says or subvocalizes. If you're really interested in finding out why he wants to kill you, I suggest you turn the problem over to the godawful police."

"Godolph, not godawful," corrected Cassal absently.

That was advice he couldn't follow, good as it seemed. He could give the police no evidence save through Dimanche. There were various reasons, many of them involving the law, for leaving the device called Dimanche out of it. The police would act if they found a body. His own, say, floating face-down on some quiet street. That didn't seem the proper approach, either.

"Weapons?"

"The first thing I searched him for. Nothing very dangerous. A long knife, a hard striking object. Both concealed on his person."

Cassal strangled slightly. Dimanche needed a good stiff course in semantics. A knife was still the most silent of weapons. A man could die from it. His hand strayed toward his pocket. He had a measure of protection himself.

"Report," said Dimanche. "Not necessarily final. Based, perhaps,

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on tenuous evidence."

"Let's have it anyway."

"His motivation is connected somehow with your being marooned here. For some reason you can't get off this planet."

That was startling information, though not strictly true. A thousand star systems were waiting for him, and a ship to take him to each one.

Of course, the one ship he wanted hadn't come in. Godolph was a transfer point for stars nearer the center of the Galaxy. When he had left Earth, he had known he would have to wait a few days here. He hadn't expected a delay of nearly three weeks. Still, it wasn't unusual. Interstellar schedules over great distances were not as reliable as they might be.

Was this man, whoever and whatever he might be, connected with that delay? According to Dimanche, the man thought he was. He was self-deluded or did he have access to information that Cassal didn't?

DENTON Cassal, sales engineer, paused for a mental survey of himself. He was a good engineer and, because he was exceptionally well matched to his instrument, the best salesman that Neuronics, Inc., had. On the basis of these qualifications, he had been selected to make a long journey, the first part of which already lay behind him. He had to go to Tunney 21 to see a man. That man wasn't important to anyone save the company that employed him, and possibly not even to them.

The thug trailing him wouldn't be interested in Cassal himself, his mission, which was a commercial one, nor the man on Tunney. And money wasn't the objective, if Dimanche's analysis was right. What *did* the thug want?

Secrets? Cassal had none, except, in a sense, Dimanche. And that was too well kept on Earth, where the instrument was invented and made, for anyone this far away to have learned about it.

And yet the thug wanted to kill him. Wanted to? Regarded him as good as dead. It might pay him to investigate the matter further, if it didn't involve too much risk.

"Better start moving." That was Dimanche. "He's getting suspicious."

Cassal went slowly along the narrow walkway that bordered each side of that boulevard, the transport tide. It was raining again. It usually was on Godolph, which was a weather-controlled planet where the natives like rain.

He adjusted the controls of the weak force field that repelled the

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rain. He widened the angle of the field until water slanted through it unhindered. He narrowed it around him until it approached visibility and the drops bounced away. He swore at the miserable climate and the near amphibians who created it.

A few hundred feet away, a Godolphian girl waded out of the transport tide and climbed to the walkway. It was this sort of thing that made life dangerous for a human—Venice revised, brought up to date in a faster-than-light age.

Water. It was a perfect engineering material. Simple, cheap, infinitely flexible. With a minimum of mechanism and at breakneck speed, the ribbon of the transport tide flowed at different levels throughout the city. The Godolphian merely plunged in and was carried swiftly and noiselessly to his destination. Whereas a human—Cassal shivered. If he were found drowned, it would be considered an accident. No investigation would be made. The thug who was trailing him had certainly picked the right place.

The Godolphian girl passed. She wore a sleek brown fur, her own. Cassal was almost positive she muttered a polite "Arf?" as she sloshed by. What she meant by that, he didn't know and didn't intend to find out.

"Follow her," instructed Dimanche. "We've got to investigate our man at closer range."

OBEDIENTLY, Cassal turned and began walking after the girl. Attractive in an anthropomorphic, seal-like way, even from behind. Not graceful out of her element, though.

The would-be assassin was still looking at merchandise as Cassal retraced his steps. A man, or at least man type. A big fellow, physically quite capable of violence, if size had anything to do with it. The face, though, was out of character. Mild, almost meek. A scientist or scholar. It didn't fit with murder.

"Nothing," said Dimanche disgustedly. "His mind froze when we got close. I could feel his shoulderblades twitching as we passed. Anticipated guilt, of course. Projecting to you the action he plans. That makes the knife definite."

Well beyond the window at which the thug watched and waited, Cassal stopped. Shakily he produced a cigarette and fumbled for a lighter.

"Excellent thinking," commended Dimanche. "He won't attempt anything on this street. Too dangerous. Turn aside at the next deserted intersection and let him follow the glow of your cigarette."

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The lighter flared in his hand. "That's one way of finding out," said Cassal. "But wouldn't I be a lot safer if I just concentrated on getting back to the hotel?"

"I'm curious. Turn here."

"Go to hell," said Cassal nervously. Nevertheless, when he came to that intersection, he turned there.

It was a Godolphian equivalent of an alley, narrow and dark, oily slow-moving water gurgling at one side, high cavernous walls looming on the other.

He would have to adjust the curiosity factor of Dimanche. It was all very well to be interested in the man who trailed him, but there was also the problem of coming out of this adventure alive. Dimanche, an electronic instrument, naturally wouldn't consider that.

"Easy," warned Dimanche. "He's at the entrance to the alley, walking fast. He's surprised and pleased that you took this route."

"I'm surprised, too," remarked Cassal. "But I wouldn't say I'm pleased. Not just now."

"Careful. Even subvocalized conversation is distracting." The mechanism concealed within his body was silent for an instant and then continued: "His blood pressure is rising, breathing is faster. At a time like this, he may be ready to verbalize why he wants to murder you. This is critical."

"That's no lie," agreed Cassal bitterly. The lighter was in his hand. He clutched it grimly. It was difficult not to look back. The darkness assumed an even more sinister quality.

"Quiet," said Dimanche. "He's verbalizing about you."

"He's decided I'm a nice fellow after all. He's going to stop and ask me for a light."

"I don't think so," answered Dimanche. "He's whispering: 'Poor devil. I hate to do it. But it's really his life or mine'."

"He's more right than he knows. Why all this violence, though? Isn't there any clue?"

"None at all," admitted Dimanche. "He's very close. You'd better turn around."

CASSAL turned, pressed the stud on the lighter. It should have made him feel more secure, but it didn't. He could see very little.

A dim shadow rushed at him. He jumped away from the water side of the alley, barely in time. He could feel the rush of air as the assailant shot by.

"Hey!" shouted Cassal.

Echoes answered; nothing else did. He had the uncomfortable feeling that no one was going to come to his assistance.

"He wasn't expecting that reaction," explained Dimanche. "That's why he missed. He's

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turned around and is coming back."

"I'm armed!" shouted Cassal.

"That won't stop him. He doesn't believe you."

Cassal grasped the lighter. That is, it had been a lighter a few seconds before. Now a needle-thin blade had snapped out and projected stiffly. Originally it had been designed as an emergency surgical instrument. A little imagination and a few changes had altered its function, converting it into a compact, efficient stiletto.

"Twenty feet away," advised Dimanche. "He knows you can't see him, but he can see your silhouette by the light from the main thoroughfare. What he doesn't know is that I can detect every move he makes and keep you posted below the level of his hearing."

"Stay on him," growled Cassal nervously. He flattened himself against the wall.

"To the right," whispered Dimanche. "Lunge forward. About five feet. Low."

Sickly, he did so. He didn't care to consider the possible effects of a miscalculation. In the darkness, how far was five feet? Fortunately, his estimate was correct. The rapier encountered yielding resistance, the soggy kind: flesh. The tough blade bent, but did not break. His opponent gasped and broke away.

"Attack!" howled Dimanche against the bone behind his ear. "You've got him. He can't imagine how you know where he is in the darkness. He's afraid."

Attack he did, slicing about wildly. Some of the thrusts landed; some didn't. The percentage was low, the total amount high. His opponent fell to the ground, gasped and was silent.

Cassal fumbled in his pockets and flipped on a light. The man lay near the water side of the alley. One leg was crumpled under him. He didn't move.

"Heartbeat slow," said Dimanche solemnly. "Breathing barely perceptible."

"Then he's not dead," said Cassal in relief.

Foam flecked from the still lips and ran down the chin. Blood oozed from cuts on the face.

"Respiration none, heartbeat absent," stated Dimanche.

HORRIFIED, Cassal gazed at the body. Self-defense, of course, but would the police believe it? Assuming they did, they'd still have to investigate. The rapier was an illegal concealed weapon. And they would question him until they discovered Dimanche. Regrettable, but what could he do about it?

Suppose he were detained long enough to miss the ship bound

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for Tunney 21?

Grimly, he laid down the rapier. He might as well get to the bottom of this. Why had the man attacked? What did he want?

"I don't know," replied Dimanche irritably. "I can interpret body data—a live body. I can't work on a piece of meat."

Cassal searched the body thoroughly. Miscellaneous personal articles of no value in identifying the man. A clip with a startling amount of money in it. A small white card with something scribbled on it. A picture of a woman and a small child posed against a background which resembled no world Cassal had ever seen. That was all.

Cassal stood up in bewilderment. Dimanche to the contrary, there seemed to be no connection between this dead man and his own problem of getting to Tunney 21.

Right now, though, he had to dispose of the body. He glanced toward the boulevard. So far no one had been attracted by the violence.

He bent down to retrieve the lighter-rapier. Dimanche shouted at him. Before he could react, someone landed on him. He fell forward, vainly trying to grasp the weapon. Strong fingers felt for his throat as he was forced to the ground.

He threw the attacker off and staggered to his feet. He heard footsteps rushing away. A slight splash followed. Whoever it was, he was escaping by way of water.

Whoever it was. The man he had thought he had slain was no longer in sight.

"Interpret body data, do you?" muttered Cassal. "Liveliest dead man I've ever been strangled by."

"It's just possible there are some breeds of men who can control the basic functions of their body," said Dimanche defensively. "When I checked him, he had no heartbeat."

"Remind me not to accept your next evaluation so completely," grunted Cassal. Nevertheless, he was relieved, in a fashion. He hadn't *wanted* to kill the man. And now there was nothing he'd have to explain to the police.

He needed the cigarette he stuck between his lips. For the second time he attempted to pick up the rapier-lighter. This time he was successful. Smoke swirled into his lungs and quieted his nerves. He squeezed the weapon into the shape of a lighter and put it away.

Something, however, was missing—his wallet.

The thug had relieved him of it in the second round of the scuffle. Persistent fellow. Damned persistent.

It really didn't matter. He

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fingered the clip he had taken from the supposedly dead body. He had intended to turn it over to the police. Now he might as well keep it to reimburse him for his loss. It contained more money than his wallet had.

Except for the identification tab he always carried in his wallet, it was more than a fair exchange. The identification, a rectangular piece of plastic, was useful in establishing credit, but with the money he now had, he wouldn't need credit. If he did, he could always send for another tab.

A white card fluttered from the clip. He caught it as it fell. Curiously he examined it. Blank except for one crudely printed word, STAB. His unknown assailant certainly had tried.

THE old man stared at the door, an obsolete visual projector wobbling precariously on his head. He closed his eyes and the lettering on the door disappeared. Cassal was too far away to see what it had been. The technician opened his eyes and concentrated. Slowly a new sign formed on the door.

TRAVELERS AID BUREAU
Murra Foray, First Counselor

It was a drab sign, but, then, it was a dismal, backward planet. The old technician passed on to the next door and closed his eyes again.

With a sinking feeling, Cassal walked toward the entrance. He needed help and he had to find it in this dingy rathole.

Inside, though, it wasn't dingy and it wasn't a rathole. More like a maze, an approved scientific one. Efficient, though not comfortable. Travelers Aid was busier than he thought it would be. Eventually he managed to squeeze into one of the many small counseling rooms.

A woman appeared on the screen, crisp and cool. "Please answer everything the machine asks. When the tape is complete, I'll be available for consultation."

Cassal wasn't sure he was going to like her. "Is this necessary?" he asked. "It's merely a matter of information."

"We have certain regulations we abide by." The woman smiled frostily. "I can't give you any information until you comply with them."

"Sometimes regulations are silly," said Cassal firmly. "Let me speak to the first counselor."

"You are speaking to her," she said. Her face disappeared from the screen.

Cassal sighed. So far he hadn't made a good impression.

Travelers Aid Bureau, in addition to regulations, was abun-

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dantly supplied with official curiosity. When the machine finished with him, Cassal had the feeling he could be recreated from the record it had of him. His individuality had been capsuled into a series of questions and answers. One thing he drew the line at—why he wanted to go to Tunney 21 was his own business.

The first counselor reappeared. Age, indeterminate. Not, he supposed, that anyone would be curious about it. Slightly taller than average, rather on the slender side. Face was broad at the brow, narrow at the chin and her eyes were enigmatic. A dangerous woman.

SHE glanced down at the data. "Denton Cassal, native of Earth. Destination, Tunney 21." She looked up at him. "Occupation, sales engineer. Isn't that an odd combination?" Her smile was quite superior.

"Not at all. Scientific training as an engineer. Special knowledge of customer relations."

"Special knowledge of a thousand races? How convenient." Her eyebrows arched.

"I think so," he agreed blandly. "Anything else you'd like to know?"

"Sorry. I didn't mean to offend you."

He could believe that or not as he wished. He didn't.

"You refused to answer why you were going to Tunney 21. Perhaps I can guess. They're the best scientists in the Galaxy. You wish to study under them."

Close — but wrong on two counts. They were good scientists, though not necessarily the best. For instance, it was doubtful that they could build Dimanche, even if they had ever thought of it, which was even less likely.

There was, however, one relatively obscure research worker on Tunney 21 that Neuronics wanted on their staff. If the fragments of his studies that had reached Earth across the vast distance meant anything, he could help Neuronics perfect instantaneous radio. The company that could build a radio to span the reaches of the Galaxy with no time lag could set its own price, which could be control of all communications, transport, trade—a galactic monopoly. Cassal's share would be a cut of all that.

His part was simple, on the surface. He was to persuade that researcher to come to Earth, *if he could*. Literally, he had to guess the Tunnesian's price before the Tunnesian himself knew it. In addition, the reputation of Tunnesian scientists being exceeded only by their arrogance, Cassal had to convince him that he wouldn't be working for ignorant Earth savages. The exist-

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ence of such an instrument as Dimanche was a key factor.

Her voice broke though his thoughts. "Now, then, what's your problem?"

"I was told on Earth I might have to wait a few days on Godolph. I've been here three weeks. I want information on the ship bound for Tunney 21."

"Just a moment." She glanced at something below the angle of the screen. She looked up and her eyes were grave. "*Rickrock C* arrived yesterday. Departed for Tunney early this morning."

"Departed?" He got up and sat down again, swallowing hard. "When will the next ship arrive?"

"Do you know how many stars there are in the Galaxy?" she asked.

He didn't answer.

"THAT'S right," she said. "Billions. Tunney, according to the notation, is near the center of the Galaxy, inside the third ring. You've covered about a third of the distance to it. Local traffic, anything within a thousand light-years, is relatively easy to manage. At longer distances, you take a chance. You've had yours and missed it. Frankly, Cassal, I don't know when another ship bound for Tunney will show up on or near Godolph. Within the next five years—maybe."

HE blanched. "How long would it take to get there using local transportation, star-hopping?"

"Take my advice: don't try it. Five years, if you're lucky."

"I don't need that kind of luck."

"I suppose not." She hesitated. "You're determined to go on?" At the emphatic nod, she sighed. "If that's your decision, we'll try to help you. To start things moving, we'll need a print of your identification tab."

"There's something funny about her," Dimanche decided. It was the usual speaking voice of the instrument, no louder than the noise the blood made in coursing through arteries and veins. Cassal could hear it plainly, because it was virtually inside his ear.

Cassal ignored his private voice. "Identification tab? I don't have it with me. In fact, I may have lost it."

She smiled in instant disbelief. "We're not trying to pry into any part of your past you may wish concealed. However, it's much easier for us to help you if you have your identification. Now if you can't *remember* your real name and where you put your identification—" She arose and left the screen. "Just a moment."

He glared uneasily at the spot where the first counselor wasn't.

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His *real* name!

"Relax," Dimanche suggested. "She didn't mean it as a personal insult."

Presently she returned.

"I have news for you, whoever you are."

"Cassal," he said firmly. "Denton Cassal, sales engineer, Earth. If you don't believe it, send back to—" He stopped. It had taken him four months to get to Godolph, non-stop, plus a six-month wait on Earth for a ship to show up that was bound in the right direction. Over distances such as these, it just wasn't practical to send back to Earth for anything.

"I see you understand." She glanced at the card in her hand. "The spaceport records indicate that when *Rickrock C* took off this morning, there was a Denton Cassal on board, bound for Tunney 21."

"It wasn't I," he said dazedly. He knew who it was, though. The man who had tried to kill him last night. The reason for the attack now became clear. The thug had wanted his identification tab. Worse, he had gotten it.

"No doubt it wasn't," she said wearily. "Outsiders don't seem to understand what galactic travel entails."

Outsiders? Evidently what she called those who lived beyond the second transfer ring. Were those who lived at the edge of the Galaxy, beyond the first ring, called Rimmers? Probably.

SHE was still speaking: "Ten years to cross the Galaxy, without stopping. At present, no ship is capable of that. Real scheduling is impossible. Populations shift and have to be supplied. A ship is taken off a run for repairs and is never put back on. It's more urgently needed elsewhere. The man who depended on it is left waiting; years pass before he learns it's never coming.

"If we had instantaneous radio, that would help. Confusion wouldn't vanish overnight, but it would diminish. We wouldn't have to depend on ships for all the news. Reservations could be made ahead of time, credit established, lost identification replaced—"

"I've traveled before," he interrupted stiffly. "I've never had any trouble."

She seemed to be exaggerating the difficulties. True, the center was more congested. Taking each star as the starting point for a limited number of ships and using statistical probability as a guide —why, no man would arrive at his predetermined destination.

But that wasn't the way it worked. Manifestly, you couldn't compare galactic transportation to the erratic paths of air mole-

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cules in a giant room. Or could you?

For the average man, anyone who didn't have his own interstellar ship, was the comparison too apt? It might be.

"You've traveled outside, where there are still free planets waiting to be settled. Where a man is welcome, if he's able to work." She paused. "The center is different. Populations are excessive. Inside the third ring, no man is allowed off a ship without an identification tab. They don't encourage immigration."

In effect, that meant no ship bound for the center would take a passenger without identification. No ship owner would run the risk of having a permanent guest on board, someone who couldn't be rid of when his money was gone.

Cassal held his head in his hands. Tunney 21 was inside the third ring.

"Next time," she said, "don't let anyone take your identification."

"I won't," he promised grimly.

THE woman looked directly at him. Her eyes were bright. He revised his estimate of her age drastically downward. She couldn't be as old as he. Nothing outward had happened, but she no longer seemed dowdy. Not that he was interested. Still, it might pay him to be friendly to the first counselor.

"We're a philanthropic agency," said Murra Foray. "Your case is special, though—"

"I understand," he said gruffly. "You accept contributions."

She nodded. "If the donor is able to give. We don't ask so much that you'll have to compromise your standard of living." But she named a sum that would force him to do just that if getting to Tunney 21 took any appreciable time.

He stared at her unhappily. "I suppose it's worth it. I can always work, if I have to."

"As a salesman?" she asked. "I'm afraid you'll find it difficult to do business with Godolphians."

Irony wasn't called for at a time like this, he thought reproachfully.

"Not just another salesman," he answered definitely. "I have special knowledge of customer reactions. I can tell exactly—"

He stopped abruptly. Was she baiting him? For what reason? The instrument he called Dimanche was not known to the Galaxy at large. From the business angle, it would be poor policy to hand out that information at random. Aside from that, he needed every advantage he could get. Dimanche was his special advantage.

"Anyway," he finished lamely,

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"I'm a first class engineer. I can always find something in that line."

"A scientist, maybe," murmured Murra Foray. "But in this part of the Milky Way, an engineer is regarded as merely a technician who hasn't yet gained practical experience." She shook her head. "You'll do better as a salesman."

He got up, glowering. "If that's all—"

"It is. We'll keep you informed. Drop your contribution in the slot provided for that purpose as you leave."

A door, which he hadn't noticed in entering the counselling cubicle, swung open. The agency was efficient.

"Remember," the counselor called out as he left, "identification is hard to work with. Don't accept a crude forgery."

He didn't answer, but it was an idea worth considering. The agency was also eminently practical.

The exit path guided him firmly to an inconspicuous and yet inescapable contribution station. He began to doubt the philanthropic aspect of the bureau.

"I'VE got it," said Dimanche as Cassal gloomily counted out the sum the first counselor had named.

"Got what?" asked Cassal. He rolled the currency into a neat bundle, attached his name, and dropped it into the chute.

"The woman, Murra Foray, the first counselor. She's a Huntner."

"What's a Huntner?"

"A sub-race of men on the other side of the Galaxy. She was vocalizing about her home planet when I managed to locate her."

"Any other information?"

"None. Electronic guards were sliding into place as soon as I reached her. I got out as fast as I could."

"I see." The significance of that, if any, escaped him. Nevertheless, it sounded depressing.

"What I want to know is," said Dimanche, "why such precautions as electronic guards? What does Travelers Aid have that's so secret?"

Cassal grunted and didn't answer. Dimanche could be annoyingly inquisitive at times.

Cassal had entered one side of a block-square building. He came out on the other side. The agency was larger than he had thought. The old man was staring at a door as Cassal came out. He had apparently changed every sign in the building. His work finished, the technician was removing the visual projector from his head as Cassal came up to him. He turned and peered.

"You stuck here, too?" he

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asked in the uneven voice of the aged.

"Stuck?" repeated Cassal. "I suppose you can call it that. I'm waiting for my ship." He frowned. He was the one who wanted to ask questions. "Why all the redecoration? I thought Travelers Aid was an old agency. Why did you change so many signs? I could understand it if the agency were new."

The old man chuckled. "Reorganization. The previous first counselor resigned suddenly, in the middle of the night, they say. The new one didn't like the name of the agency, so she ordered it changed."

She would do just that, thought Cassal. "What about this Murra Foray?"

The old man winked mysteriously. He opened his mouth and then seemed overcome with senile fright. Hurriedly he shuffled away.

Cassal gazed after him, baffled. The old man was afraid for his job, afraid of the first counselor. Why he should be, Cassal didn't know. He shrugged and went on. The agency was now in motion in his behalf, but he didn't intend to depend on that alone.

"THE girl ahead of you is making unnecessary wriggling motions as she walks," observed Dimanche. "Several men are looking on with approval. I don't understand."

Cassal glanced up. They walked that way back in good old L.A. A pang of homesickness swept through him.

"Shut up," he growled plaintively. "Attend to the business at hand."

"Business? Very well," said Dimanche. "Watch out for the transport tide."

Cassal swerved back from the edge of the water. Murra Foray had been right. Godolphians didn't want or need his skills, at least not on terms that were acceptable to him. The natives didn't have to exert themselves. They lived off the income provided by travelers, with which the planet was abundantly supplied by ship after ship.

Still, that didn't alter his need for money. He walked the streets at random while Dimanche probed.

"Ah!"

"What is it?"

"That man. He crinkles something in his hands. Not enough, he is subvocalizing."

"I know how he feels," commented Cassal.

"Now his throat tightens. He bunches his muscles. 'I know where I can get more,' he tells himself. He is going there."

"A sensible man," declared Cassal. "Follow him."

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Boldly the man headed toward a section of the city which Cassal had not previously entered. He believed opportunity lay there. Not for everyone. The shrewd, observant, and the courageous could succeed if—The word that the quarry used was a slang term, unfamiliar to either Cassal or Dimanche. It didn't matter as long as it led to money.

Cassal stretched his stride and managed to keep the man in sight. He skipped nimbly over the narrow walkways that curved through the great buildings. The section grew dingier as they proceeded. Not slums; not the showplace city frequented by travelers, either.

Abruptly the man turned into a building. He was out of sight when Cassal reached the structure.

He stood at the entrance and stared in disappointment. "Opportunities Inc.," Dimanche quoted softly in his ear. "Science, thrills, chance. What does that mean?"

"It means that we followed a gravity ghost!"

"What's a gravity ghost?"

"An unexplained phenomena," said Cassal nastily. "It affects the instruments of spaceships, giving the illusion of a massive dark body that isn't there."

"But you're not a pilot. I don't understand."

"You're not a very good pilot yourself. We followed the man to a gambling joint."

"Gambling," mused Dimanche. "Well, isn't it an opportunity of a sort? Someone inside is thinking of the money he's winning."

"The owner, no doubt."

Dimanche was silent, investigating. "It is the owner," he confirmed finally. "Why not go in, anyway. It's raining. And they serve drinks." Left unstated was the admission that Dimanche was curious, as usual.

CASSAL went in and ordered a drink. It was a variable place, depending on the spectator —bright, cheerful, and harmonious if he were winning, garish and depressingly vulgar if he were not. At the moment Cassal belonged to neither group. He reserved judgment.

An assortment of gaming devices were in operation. One in particular seemed interesting. It involved the counting of electrons passing through an aperture, based on probability.

"Not that," whispered Dimanche. "It's rigged."

"But it's not necessary," Cassal murmured. "Pure chance alone is good enough."

"They don't take chances, pure or adulterated. Look around. How many Godolphians do you see?"

Cassal looked. Natives were

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not even there as servants. Strictly a clip joint, working travelers.

Unconsciously, he nodded. "That does it. It's not the kind of opportunity I had in mind."

"Don't be hasty," objected Dimanche. "Certain devices I can't control. There may be others in which my knowledge will help you. Stroll around and sample some games."

Cassal equipped himself with a supply of coins and sauntered through the establishment, disbursing them so as to give himself the widest possible acquaintance with the layout.

"That one," instructed Dimanche.

It received a coin. In return, it rewarded him with a large shower of change. The money spilled to the floor with a satisfying clatter. An audience gathered rapidly, ostensibly to help him pick up the coins.

"There was a circuit in it," explained Dimanche. "I gave it a shot of electrons and it paid out."

"Let's try it again," suggested Cassal.

"Let's not," Dimanche said regretfully. "Look at the man on your right."

Cassal did so. He jammed the money back in his pocket and stood up. Hastily, he began thrusting the money back into the machine. A large and very unconcerned man watched him.

"You get the idea," said Dimanche. "It paid off two months ago. It wasn't scheduled for another this year." Dimanche scrutinized the man in a multitude of ways while Cassal continued play. "He's satisfied," was the report at last. "He doesn't detect any sign of crookedness."

"*Crookedness?*"

"On your part, that is. In the ethics of a gambling house, what's done to insure profit is merely prudence."

THEY moved on to other games, though Cassal lost his briefly acquired enthusiasm. The possibility of winning seemed to grow more remote.

"Hold it," said Dimanche. "Let's look into this."

"Let me give *you* some advice," said Cassal. "This is one thing we can't win at. Every race in the Galaxy has a game like this. Pieces of plastic with values printed on them are distributed. The trick is to get certain arbitrarily selected sets of values in the plastics dealt to you. It seems simple, but against a skilled player a beginner can't win."

"Every race in the Galaxy," mused Dimanche. "What do men call it?"

"Cards," said Cassal, "though there are many varieties within that general classification." He launched into a detailed exposi-

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tion of the subject. If it were something he was familiar with, all right, but a foreign deck and strange rules—

Nevertheless, Dimanche was interested. They stayed and observed.

The dealer was clumsy. His great hands enfolded the cards. Not a Godolphian nor quite human, he was an odd type, difficult to place. Physically burly, he wore a garment chiefly remarkable for its ill-fitting appearance. A hard round hat

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jammed closely over his skull completed the outfit. He was dressed in a manner that, somewhere in the Universe, was evidently considered the height of fashion.

"It doesn't seem bad," commented Cassal. "There might be a chance."

"Look around," said Dimanche. "Everyone thinks that. It's the classic struggle, person against person and everyone against the house. Naturally, the house doesn't lose."

"Then why are we wasting our time?"

"Because I've got an idea," said Dimanche. "Sit down and take a hand."

"Make up your mind. You said the house doesn't lose."

"The house hasn't played against us. Sit down. You get eight cards, with the option of two more. I'll tell you what to do."

Cassal waited until a disconsolate player relinquished his seat and stalked moodily away. He played a few hands and bet small sums in accordance with Dimanche's instructions. He held his own and won insignificant amounts while learning.

It was simple. Nine orders, or suits, of twenty-seven cards each. Each suit would build a different equation. The lowest hand was a quadratic. A cubic would beat it. All he had to do was remember his math, guess at what he didn't remember, and draw the right cards.

"What's the highest possible hand?" asked Dimanche. There was a note of abstraction in his voice, as if he were paying more attention to something else.

Cassal peeked at the cards that were face-down on the table. He shoved some money into the betting square in front of him and didn't answer.

"You had it last time," said Dimanche. "A three dimensional encephalocurve. A time modulated brainwave. If you had bet right, you could have owned the house by now."

"I did? Why didn't you tell me?"

"Because you had it three successive times. The probabilities against that are astronomical. I've got to find out what's happening before you start betting recklessly."

"It's not the dealer," declared Cassal. "Look at those hands."

They were huge hands, more suitable, seemingly, for crushing the life from some alien beast than the delicate manipulation of cards. Cassal continued to play, betting brilliantly by the only standard that mattered: he won.

ONE player dropped out and was replaced by a recruit

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from the surrounding crowd. Cassal ordered a drink. The waiter was placing it in his hand when Dimanche made a discovery.

"I've got it!"

A shout from Dimanche was roughly equivalent to a noiseless kick in the head. Cassal dropped the drink. The player next to him scowled but said nothing. The dealer blinked and went on dealing.

"What have you got?" asked Cassal, wiping up the mess and trying to keep track of the cards.

"How he fixes the deck," explained Dimanche in a lower and less painful tone. "Clever."

Muttering, Cassal shoved a bet in front of him.

"Look at that hat," said Dimanche.

"Ridiculous, isn't it? But I see no reason to gloat because I have better taste."

"That's not what I meant. It's pulled down low over his knobby ears and touches his jacket. His jacket rubs against his trousers, which in turn come in contact with the stool on which he sits."

"True," agreed Cassal, increasing his wager. "But except for his physique, I don't see anything unusual."

"It's a circuit, a visual projector broken down into components. The hat is a command circuit which makes contact, via his clothing, with the broadcasting unit built into the chair. The existence of a visual projector is completely concealed."

Cassal bit his lip and squinted at his cards. "Interesting. What does it have to do with anything?"

"The deck," exclaimed Dimanche excitedly. "The backs are regular, printed with an intricate design. The front is a special plastic, susceptible to the influence of the visual projector. He doesn't need manual dexterity. He can make any value appear on any card he wants. It will stay there until he changes it."

Cassal picked up the cards. "I've got a Loreenaroo equation. Can he change that to anything else?"

"He can, but he doesn't work that way. He decides before he deals who's going to get what. He concentrates on each card as he deals it. He can change a hand after a player gets it, but it wouldn't look good."

"It wouldn't." Cassal wistfully watched the dealer rake in his wager. His winnings were gone, plus. The newcomer to the game won.

He started to get up. "Sit down," whispered Dimanche. "We're just beginning. Now that we know what he does and how he does it, we're going to take him."

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THE next hand started in the familiar pattern, two cards of fairly good possibilities, a bet, and then another card. Cassal watched the dealer closely. His clumsiness was only superficial. At no time were the faces of the cards visible. The real skill was unobservable, of course—the swift bookkeeping that went on in his mind. A duplication in the hands of the players, for instance, would be ruinous.

Cassal received the last card. "Bet high," said Dimanche. With trepidation, Cassal shoved the money into the betting area.

The dealer glanced at his hand and started to sit down. Abruptly he stood up again. He scratched his cheek and stared puzzledly at the players around him. Gently he lowered himself onto the stool. The contact was even briefer. He stood up in indecision. An impatient murmur arose. He dealt himself a card, looked at it, and paid off all the way around. The players buzzed with curiosity.

"What happened?" asked Cassal as the next hand started.

"I induced a short in the circuit," said Dimanche. "He couldn't sit down to change the last card he got. He took a chance, as he had to, and dealt himself a card, anyway."

"But he paid off without asking to see what we had."

"It was the only thing he could do," explained Dimanche. "He had duplicate cards."

The dealer was scowling. He didn't seem quite so much at ease. The cards were dealt and the betting proceeded almost as usual. True, the dealer was nervous. He couldn't sit down and stay down. He was sweating. Again he paid off. Cassal won heavily and he was not the only one.

The crowd around them grew almost in a rush. There is an indefinable sense that tells one gambler when another is winning.

This time the dealer stood up. His leg contacted the stool occasionally. He jerked it away each time he dealt to himself. At the last card he hesitated. It was amazing how much he could sweat. He lifted a corner of the cards. Without indicating what he had drawn, determinedly and deliberately he sat down. The chair broke. The dealer grinned weakly as a waiter brought him another stool.

"They still think it may be a defective circuit," whispered Dimanche.

The dealer sat down and sprang up from the new chair in one motion. He gazed bitterly at the players and paid them.

"He had a blank hand," explained Dimanche. "He made contact with the broadcasting circuit long enough to erase, but

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not long enough to put anything in its place."

The dealer adjusted his coat. "I have a nervous disability," he declared thickly. "If you'll pardon me for a few minutes while I take a treatment—"

"Probably going to consult with the manager," observed Cassal.

"He is the manager. He's talking with the owner."

"Keep track of him."

A blonde, pretty, perhaps even Earth-type human, smiled and wriggled closer to Cassal. He smiled back.

"Don't fall for it," warned Dimanche. "She's an undercover agent for the house."

Cassal looked her over carefully. "Not much under cover."

"But if she should discover—"

"Don't be stupid. She'll never guess you exist. There's a small lump behind my ear and a small round tube cleverly concealed elsewhere."

"All right," sighed Dimanche resignedly. "I suppose people will always be a mystery to me."

The dealer reappeared, followed by an unobtrusive man who carried a new stool. The dealer looked subtly different, though he was the same person. It took a close inspection to determine what the difference was. His clothing was new, unrumpled, unmarked by perspiration. During his brief absence, he had been furnished with new visual projector equipment, and it had been thoroughly checked out. The house intended to locate the source of the disturbance.

Mentally, Cassal counted his assets. He was solvent again, but in other ways his position was not so good.

"Maybe," he suggested, "we should leave. With no further interference from us, they might believe defective equipment is the cause of their losses."

"Maybe," replied Dimanche, "you think the crowd around us is composed solely of patrons?"

"I see," said Cassal soberly.

He stretched his legs. The crowd pressed closer, uncommonly aggressive and ill-tempered for mere spectators. He decided against leaving.

"Let's resume play." The dealer-manager smiled blandly at each player. He didn't suspect any one person—yet.

"He might be using an honest deck," said Cassal hopefully.

"They don't have that kind," answered Dimanche. He added absently: "During his conference with the owner, he was given authority to handle the situation in any way he sees fit."

Bad, but not too bad. At least Cassal was opposing someone who had authority to let him

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keep his winnings, *if he could be convinced.*

The dealer deliberately sat down on the stool. Testing. He could endure the charge that trickled through him. The bland smile spread into a triumphant one.

"While he was gone, he took a sedative," analyzed Dimanche. "He also had the strength of the broadcasting circuit reduced. He thinks that will do it."

"Sedatives wear off," said Cassal. "By the time he knows it's me, see that it has worn off. Mess him up."

THE game went on. The situation was too much for the others. They played poorly and bet atrociously, on purpose. One by one they lost and dropped out. They wanted badly to win, but they wanted to live even more.

The joint was jumping, and so was the dealer again. Sweat rolled down his face and there were tears in his eyes. So much liquid began to erode his fixed smile. He kept replenishing it from some inner source of determination.

Cassal looked up. The crowd had drawn back, or had been forced back by hirelings who mingled with them. He was alone with the dealer at the table. Money was piled high around him. It was more than he needed, more than he wanted.

"I suggest one last hand," said the dealer - manager, grimacing. It sounded a little stronger than a suggestion.

Cassal nodded.

"For a substantial sum," said the dealer, naming it.

Miraculously, it was an amount that equaled everything Cassal had. Again Cassal nodded.

"Pressure," muttered Cassal to Dimanche. "The sedative has worn off. He's back at the level at which he started. Fry him if you have to."

The cards came out slowly. The dealer was jittering as he dealt. Soft music was lacking, but not the motions that normally accompanied it. Cassal couldn't believe that cards could be so bad. Somehow the dealer was rising to the occasion. Rising and sitting.

"There's a nerve in your body," Cassal began conversationally, "which, if it were overloaded, would cause you to drop dead."

The dealer didn't examine his cards. He didn't have to. "In that event, someone would be arrested for murder," he said. "You."

That was the wrong tack; the humanoid had too much courage. Cassal passed his hand over his eyes. "You can't do this to men, but, strictly speaking, the dealer's not human. Try suggestion on him. Make him change the cards.

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Play him like a piano. Pizzicato on the nerve strings."

Dimanche didn't answer; presumably he was busy scrambling the circuits.

The dealer stretched out his hand. It never reached the cards. Danger: Dimanche at work. The smile dropped from his face. What remained was pure anguish. He was too dry for tears. Smoke curled up faintly from his jacket.

"Hot, isn't it?" asked Cassal. "It might be cooler if you took off your cap."

The cap tinkled to the floor. The mechanism in it was destroyed. What the cards were, they were. Now they couldn't be changed.

"That's better," said Cassal.

HE glanced at his hand. In the interim, it had changed slightly. Dimanche had got there.

The dealer examined his cards one by one. His face changed color. He sat utterly still on a cool stool.

"You win," he said hopelessly. "Let's see what you have."

The dealer-manager roused himself. "You won. That's good enough for you, isn't it?"

Cassal shrugged. "You have Bank of the Galaxy service here. I'll deposit my money with them *before* you pick up your cards."

The dealer nodded unhappily and summoned an assistant. The crowd, which had anticipated violence, slowly began to drift away.

"What did you do?" asked Cassal silently.

"Men have no shame," sighed Dimanche. "Some humanoids do. The dealer was one who did. I forced him to project onto his cards something that wasn't a suit at all."

"Embarrassing if that got out," agreed Cassal. "What did you project?"

Dimanche told him. Cassal blushed, which was unusual for a man.

The dealer-manager returned and the transaction was completed. His money was safe in the Bank of the Galaxy.

"Hereafter, you're not welcome," said the dealer morosely. "Don't come back."

Cassal picked up the cards without looking at them. "And no accidents after I leave," he said, extending the cards face-down. The manager took them and trembled.

"He's an honorable humanoid, in his own way," whispered Dimanche. "I think you're safe."

It was time to leave. "One question," Cassal called back. "What do you call this game?"

Automatically the dealer started to answer. "Why everyone knows . . ." He sat down, his mouth open.

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It was more than time to leave.

Outside, he hailed an air taxi. No point in tempting the management.

"Look," said Dimanche as the cab rose from the surface of the transport tide.

A technician with a visual projector was at work on the sign in front of the gaming house. Huge words took shape: WARNING—NO TELEPATHS ALLOWED.

There were no such things anywhere, but now there were rumors of them.

ARRIVING at the habitat wing of the hotel, Cassal went directly to his room. He awaited the delivery of the equipment he had ordered and checked through it thoroughly. Satisfied that everything was there, he estimated the size of the room. Too small for his purpose.

He picked up the intercom and dialed Services. "Put a Life Stage Cordon around my suite," he said briskly.

The face opposite his went blank. "But you're an Earthman. I thought—"

"I know more about my own requirements than your Life Stage Bureau. Earthmen do have life stages. You know the penalty if you refuse that service."

There were some races who went without sleep for five months and then had to make up for it. Others grew vestigial wings for brief periods and had to fly with them or die; reduced gravity would suffice for that. Still others—

But the one common feature was always a critical time in which certain conditions were necessary. Insofar as there was a universal law, from one end of the Galaxy to the other, this was it: The habitat hotel had to furnish appropriate conditions for the maintenance of any life-form that requested it.

The Godolphian disappeared from the screen. When he came back, he seemed disturbed.

"You spoke of a suite. I find that you're listed as occupying one room."

"I am. It's too small. Convert the rooms around me into a suite."

"That's very expensive."

"I'm aware of that. Check the Bank of the Galaxy for my credit rating."

He watched the process take place. Service would be amazingly good from now on.

"Your suite will be converted in about two hours. The Life Stage Cordon will begin as soon after that as you want. If you tell me how long you'll need it, I can make arrangements now."

"About ten hours is all I'll need." Cassal rubbed his jaw reflectively. "One more thing. Put

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a perpetual service at the spaceport. If a ship comes in bound for Tunney 21 or the vicinity of it, get accommodations on it for me. And hold it until I get ready, no matter what it costs."

He flipped off the intercom and promptly went to sleep. Hours later, he was awakened by a faint hum. The Life Stage Cordon had just been snapped safely around his newly created suite.

"Now what?" asked Dimanche.

"I need an identification tab."

"You do. And forgeries are expensive and generally crude, as that Huntner woman, Murra Foray, observed."

CASSAL glanced at the equipmen. "Expensive, yes. Not crude when we do it."

"*We* forge it?" Dimanche was incredulous.

"That's what I said. Consider it this way. I've seen my tab a countless number of times. If I tried to draw it as I remember it, it would be inept and wouldn't pass. Nevertheless, that memory is in my mind, recorded in neuronic chains, exact and accurate." He paused significantly. "You have access to that memory."

"At least partially. But what good does that do?"

"Visual projector and plastic which will take the imprint. I think hard about the identification as I remember it. You record and feed it back to me while I concentrate on projecting it on the plastic. After we get it down, we change the chemical composition of the plastic. It will then pass everything except destructive analysis, and they don't often do that."

Dimanche was silent. "Ingenious," was its comment. "Part of that we can manage, the official engraving, even the electron stamp. That, however, is gross detail. The print of the brain area is beyond our capacity. We can put down what you remember, and you remember what you saw. You didn't see fine enough, though. The general area will be recognizable, but not the fine structure, nor the charges stored there nor their interrelationship."

"But we've got to do it," Cassal insisted, pacing about nervously.

"With more equipment to probe—"

"Not a chance. I got one Life Stage Cordon on a bluff. If I ask for another, they'll look it up and refuse."

"All right," said Dimanche, humming. The mechanical attempt at music made Cassal's head ache. "I've got an idea. Think about the identification tab."

Cassal thought.

"Enough," said Dimanche. "Now poke yourself."

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"Where?"

"Everywhere," replied Dimanche irritably. "One place at a time."

Cassal did so, though it soon became monotonous.

Dimanche stopped him. "Just above your right knee."

"What above my right knee?"

"The principal access to that part of your brain we're concerned with," said Dimanche. "We can't photomeasure your brain the way it was originally done, but we can investigate it remotely. The results will be simplified, naturally. Something like a scale model as compared to the original. A more apt comparison might be that of a relief map to an actual locality."

"Investigate it remotely?" muttered Cassal. A horrible suspicion touched his consciousness. He jerked away from that touch. "What does that mean?"

"What it sounds like. Stimulus and response. From that I can construct an accurate chart of the proper portion of your brain. Our probing instruments will be crude out of necessity, but effective."

"I've already visualized those probing instruments," said Cassal worriedly. "Maybe we'd bet-

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ter work first on the official engraving and the electron stamp, while I'm still fresh. I have a feeling . . ."

"Excellent suggestion," said Dimanche.

Cassal gathered the articles slowly. His lighter would burn and it would also cut. He needed a heavy object to pound with. A violent irritant for the nerve endings. Something to freeze his flesh . . .

Dimanche interrupted: "There are also a few glands we've got to pick up. See if there's a stimi in the room."

"Stimi? Oh yes, a stimulator. Never use the damned things." But he was going to. The next few hours weren't going to be pleasant. Nor dull, either.

Life could be difficult on Godolph.

AS soon as the Life Stage Cordon came down, Cassal called for a doctor. The native looked at him professionally.

"Is this a part of the Earth life process?" he asked incredulously. Gingerly, he touched the swollen and lacerated leg.

Cassal nodded wearily. "A matter of life and death," he croaked.

"If it is, then it is," said the doctor, shaking his head. "I, for one, am glad to be a Godolphian."

"To each his own habitat," Cassal quoted the motto of the hotel.

Godolphians were clumsy, good-natured caricatures of seals. There was nothing wrong with their medicine, however. In a matter of minutes he was feeling better. By the time the doctor left, the swelling had subsided and the open wounds were fast closing.

Eagerly, he examined the identification tab. As far as he could tell, it was perfect. What the scanner would reveal was, of course, another matter. He had to check that as best he could without exposing himself.

Services came up to the suite right after he laid the intercom down. A machine was placed over his head and the identification slipped into the slot. The code on the tab was noted; the machine hunted and found the corresponding brain area. Structure was mapped, impulses recorded, scrambled, converted into a ray of light which danced over a film.

The identification tab was similarly recorded. There was now a means of comparison.

Fingerprints could be duplicated—that is, if the race in question had fingers. Every intelligence, however much it differed from its neighbors, had a brain, and tampering with that brain was easily detected. Each

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identification tab carried a psychometric number which corresponded to the total personality. Alteration of any part of the brain could only subtract from personality index.

The technician removed the identification and gave it to Cassal. "Where shall I send the strips?"

"You don't," said Cassal. "I have a private message to go with them."

"But that will invalidate the process."

"I know. This isn't a formal contract."

Removing the two strips and handing them to Cassal, the technician wheeled the machine away. After due thought, Cassal composed the message.

Travelers Aid Bureau
Murra Foray, first counselor:
If you were considering another identification tab for me, don't. As you can see, I've located the missing item.

He attached the message to the strips and dropped them into the communication chute.

HE was wiping his whiskers away when the answer came. Hastily he finished and wrapped himself, noting but not approving the amused glint in her eyes as she watched. His morals were his own, wherever he went.

"Denton Cassal," she said. "A wonderful job. The two strips were in register within one per cent. The best previous forgery I've seen was six per cent, and that was merely a lucky accident. It couldn't be duplicated. Let me congratulate you."

His dignity was professional. "I wish you weren't so fond of that word 'forgery.' I told you I mislaid the tab. As soon as I found it, I sent you proof. I want to get to Tunney 21. I'm willing to do anything I can to speed up the process."

Her laughter tinkled. "You don't *have* to tell me how you did it or where you got it. I'm inclined to think you made it. You understand that I'm not concerned with legality as such. From time to time the agency has to furnish missing documents. If there's a better way than we have, I'd like to know it."

He sighed and shook his head. For some reason, his heart was beating fast. He wanted to say more, but there was nothing to say.

When he failed to respond, she leaned toward him. "Perhaps you'll discuss this with me. At greater length."

"At the agency?"

She looked at him in surprise. "Have you been sleeping? The agency is closed for the day. The

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first counselor can't work all the time, you know."

Sleeping? He grimaced at the remembrance of the self-administered beating. No, he hadn't been sleeping. He brushed the thought aside and boldly named a place. Dinner was acceptable.

Dimanche waited until the screen was dark. The words were carefully chosen.

"Did you notice," he asked, "that there was no apparent change in clothing and makeup, yet she seemed younger, more attractive?"

"I didn't think you could trace her that far."

"I can't. I looked at her through your eyes."

"Don't trust my reaction," advised Cassal. "It's likely to be subjective."

"I don't," answered Dimanche. "It is."

Cassal hummed thoughtfully. Dimanche was a business neurological instrument. It didn't follow that it was an expert in human psychology.

CASSAL stared at the woman coming toward him. Center-of-the-Galaxy fashion. Decadent, of course, or maybe ultra-civilized. As an Outsider, he wasn't sure which. Whatever it was, it did to the human body what should have been done long ago.

And this body wasn't exactly human. The subtle skirt of proportions betrayed it as an offshoot or deviation from the human race. Some of the new sub-races stacked up against the original stock much in the same way Cro-Magnons did against Neanderthals, in beauty, at least.

Dimanche spoke a single syllable and subsided, an event Cassal didn't notice. His consciousness was focused on another discovery: the woman was Murra Foray.

He knew vaguely that the first counselor was not necessarily what she had seemed that first time at the agency. That she was capable of such a metamorphosis was hard to believe, though pleasant to accept. His attitude must have shown on his face.

"Please," said Murra Foray. "I'm a Huntner. We're adept at camouflage."

"Huntner," he repeated blankly. "I knew that. But what's a Huntner?"

She wrinkled her lovely nose at the question. "I didn't expect you to ask that. I won't answer it now." She came closer. "I thought you'd ask which was the camouflage—the person you see here, or the one at the Bureau?"

He never remembered the reply he made. It must have been satisfactory, for she smiled and drew her fragile wrap closer. The reservations were waiting.

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Dimanche seized the opportunity to speak. "There's something phony about her. I don't understand it and I don't like it."

"You," said Cassal, "are a machine. You don't have to like it."

"That's what I mean. You *have* to like it. You have no choice."

Murra Foray looked back questioningly. Cassal hurried to her side.

The evening passed swiftly. Food that he ate and didn't taste. Music he heard and didn't listen to. Geometric light fugues that were seen and not observed. Liquor that he drank—and here the sequence ended, in the complicated chemistry of Godolphian stimulants.

Cassal reacted to that smooth liquid, though his physical reactions were not slowed. Certain mental centers were depressed, others left wide open, subject to acceleration at whatever speed he demanded.

Murra Foray, in his eyes at least, might look like a dream, the kind men have and never talk about. She was, however, interested solely in her work, or so it seemed.

"GODOLPH is a nice place," she said, toying with a drink, "if you like rain. The natives seem happy enough. But the Galaxy is big and there are lots of strange planets in it, each of which seems ideal to those who are adapted to it. I don't have to tell you what happens when people travel. They get stranded. It's not the time spent in actual flight that's important; it's waiting for the right ship to show up and then having all the necessary documents. Believe me, that can be important, as you found out."

He nodded. He had.

"That's the origin of Travelers Aid Bureau," she continued. "A loose organization, propagated mainly by example. Sometimes it's called Star Travelers Aid. It may have other names. The aim, however, is always the same: to see that stranded persons get where they want to go."

She looked at him wistfully, appealingly. "That's why I'm interested in your method of creating identification tabs. It's the thing most commonly lost. Stolen, if you prefer the truth."

She seemed to anticipate his question. "How can anyone use another's identification? It can be done under certain circumstances. By neural lobotomy, a portion of one brain may be made to match, more or less exactly, the code area of another brain. The person operated on suffers a certain loss of function, of course. How great that loss is depends on the degree of similarity between the two brain areas before the opera-

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tion took place."

She ought to know, and he was inclined to believe her. Still, it didn't sound feasible.

"You haven't accounted for the psychometric index," he said.

"I thought you'd see it. That's diminished, too."

Logical enough, though not a pretty picture. A genius could always be made into an average man or lowered to the level of an idiot. There was no operation, however, that could raise an idiot to the level of a genius.

The scramble for the precious identification tabs went on, from the higher to the lower, a game of musical chairs with grim overtones.

She smiled gravely. "You haven't answered my implied question."

The company that employed him wasn't anxious to let the secret of Dimanche get out. They didn't sell the instrument; they made it for their own use. It was an advantage over their competitors they intended to keep. Even on his recommendation, they wouldn't sell to the agency.

Moreover, it wouldn't help Travelers Aid Bureau if they did. Since she was first counselor, it was probable that she'd be the one to use it. She couldn't make identification for anyone except herself, and then only if she developed exceptional skill.

The alternative was to surgery it in and out of whoever needed it. When that happened, secrecy was gone. Travelers couldn't be trusted.

HE shook his head. "It's an appealing idea, but I'm afraid I can't help you."

"Meaning you won't."

This was intriguing. Now it was the agency, not he, who wanted help.

"Don't overplay it," cautioned Dimanche, who had been consistently silent.

She leaned forward attentively. He experienced an uneasy moment. Was it possible she had noticed his private conversation? Of course not. Yet—

"Please," she said, and the tone allayed his fears. "There's an emergency situation and I've got to attend to it. Will you go with me?" She smiled understandingly at his quizzical expression. "Travelers Aid is always having emergencies."

She was rising. "It's too late to go to the Bureau. My place has a number of machines with which I keep in touch with the spaceport."

"I wonder," said Dimanche puzzledly. "She doesn't subvocalize at all. I haven't been able to get a line on her. I'm certain she didn't receive any sort of call. Be careful.

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"This might be a trick."

"Interesting," said Cassal. He wasn't in the mood to discuss it.

Her habitation was luxurious, though Cassal wasn't impressed. Luxury was found everywhere in the Universe. Huntner women weren't. He watched as she adjusted the machines grouped at one side of the room. She spoke in a low voice; he couldn't distinguish words. She actuated levers, pressed buttons: impedimenta of communication.

At last she finished. "I'm tired. Will you wait till I change?"

Inarticulately, he nodded.

"I think her 'emergency' was a fake," said Dimanche flatly as soon as she left. "I'm positive she wasn't operating the communicator. She merely went through the motions."

"Motions," murmured Cassal dreamily, leaning back. "And what motions."

"I've been watching her," said Dimanche. "She frightens me."

"I've been watching her, too. Maybe in a different way."

"Get out of here while you can," warned Dimanche. "She's dangerous."

MOMENTARILY, Cassal considered it. Dimanche had never failed him. He ought to follow that advice. And yet there was another explanation.

"Look," said Cassal. "A machine is a machine. But among humans there are men and women. What seems dangerous to you may be merely a pattern of normal behavior . . ." He broke off. Murra Foray had entered.

Strictly from the other side of the Galaxy, which she was. A woman can be slender and still be womanly beautiful, without being obvious about it. Not that Murra disdained the obvious, technically. But he could see through technicalities.

The tendons in his hands ached and his mouth was dry, though not with fear. An urgent ringing pounded in his ears. He shook it out of his head and got up.

She came to him.

The ringing was still in his ears. It wasn't a figment of imagination; it was a real voice—that of Dimanche, howling:

"Huntner! It's a word variant. In their language it means Hunter. *She can hear me!*"

"Hear you?" repeated Cassal vacantly.

She was kissing him.

"A descendant of carnivores. An audio-sensitive. She's been listening to you and me all the time."

"Of course I have, ever since the first interview at the bureau," said Murra. "In the beginning I couldn't see what value it was, but you convinced me." She laid her hand gently over his eyes. "I

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hate to do this to you, dear, but I've got to have Dimanche."

She had been smothering him with caresses. Now, deliberately, she began smothering him in actuality.

Cassal had thought he was an athlete. For an Earthman, he was. Murra Foray, however, was a Huntner, which meant hunter—a descendant of incredibly strong carnivores.

He didn't have a chance. He knew that when he couldn't budge her hands and he fell into the airless blackness of space.

ALONE and naked, Cassal awakened. He wished he hadn't. He turned over and, though he tried hard not to, promptly woke up again. His body was willing to sleep, but his mind was panicked and disturbed. About what, he wasn't sure.

He sat up shakily and held his roaring head in his hands. He ran aching fingers through his hair. He stopped. The lump behind his ear was gone.

"Dimanche!" he called, and looked at his abdomen.

There was a thin scar, healing visibly before his eyes.

"Dimanche!" he cried again. "Dimanche!"

There was no answer. Dimanche was no longer with him.

He staggered to his feet and stared at the wall. She'd been kind enough to return him to his own rooms. At length he gathered enough strength to rummage through his belongings. Nothing was missing. Money, identification—all were there.

He could go to the police. He grimaced as he thought of it. The neighborly Godolphian police were hardly a match for the Huntner; she'd fake them out of their skins.

He couldn't prove she'd taken Dimanche. Nothing else normally considered valuable was missing. Besides, there might even be a local prohibition against Dimanche. Not by name, of course; but they could dig up an ancient ordinance — invasion of privacy or something like that. Anything would do if it gave them an opportunity to confiscate the device for intensive study.

For the police to believe his story was the worst that could happen. They might locate Dimanche, but he'd never get it.

He smiled bitterly and the effort hurt. "Dear," she had called him as she had strangled and beaten him into unconsciousness. Afterward singing, very likely, as she had sliced the little instrument out of him.

He could picture her not very remote ancestors springing from cover and overtaking a fleeing herd—

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No use pursuing that line of thought.

Why did she want Dimanche? She had hinted that the agency wasn't always concerned with legality as such. He could believe her. If she wanted it for making identification tabs, she'd soon find that it was useless. Not that that was much comfort—she wasn't likely to return Dimanche after she'd made that discovery.

FOR that matter, what was the purpose of Travelers Aid Bureau? It was a front for another kind of activity. Philanthropy had nothing to do with it.

If he still had possession of Dimanche, he'd be able to find out. Everything seemed to hinge on that. With it, he was nearly a superman, able to hold his own in practically all situations — anything that didn't involve a Huntner woman, that is.

Without it—well, Tunney 21 was still far away. Even if he should manage to get there without it, his mission on the planet was certain to fail.

He dismissed the idea of trying to recover it immediately from Murra Foray. She was an audio-sensitive. At twenty feet, unaided, she could hear a heartbeat, the internal noise muscles made in sliding over each other. With Dimanche, she could hear electrons rustling. As an antagonist she was altogether too formidable.

HE began pulling on his clothing, wincing as he did so. The alternative was to make another Dimanche. *If* he could. It would be a tough job even for a neuronic expert familiar with the process. He wasn't that expert, but it still had to be done.

The new instrument would have to be better than the original. Maybe not such a slick machine, but more comprehensive. More wallop. He grinned as he thought hopefully about giving Murra Foray a surprise.

Ignoring his aches and pains, he went right to work. With money not a factor, it was an easy matter to line up the best electronic and neuron concerns on Godolph. Two were put on a standby basis. When he gave them plans, they were to rush construction at all possible speed.

Each concern was to build a part of the new instrument. Neither part was of value without the other. The slow-thinking Godolphians weren't likely to make the necessary mental connection between the seemingly unrelated projects.

He retired to his suite and began to draw diagrams. It was harder than he thought. He knew the principles, but the actual details were far more complicated

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than he remembered.

Functionally, the Dimanche instrument was divided into three main phases. There was a brain and memory unit that operated much as the human counterpart did. Unlike the human brain, however, it had no body to control, hence more of it was available for thought processes. Entirely neuronic in construction, it was far smaller than an electronic brain of the same capacity.

The second function was electronic, akin to radar. Instead of material objects, it traced and recorded distant nerve impulses. It could count the heartbeat, measure the rate of respiration, was even capable of approximate analysis of the contents of the bloodstream. Properly focused on the nerves of tongue, lips or larynx, it transmitted that data back to the neuronic brain, which then reconstructed it into speech. Lip reading, after a fashion, carried to the ultimate.

Finally, there was the voice of Dimanche, a speaker under the control of the neuronic brain.

For convenience of installation in the body, Dimanche was packaged in two units. The larger package was usually surgeried into the abdomen. The small one, containing the speaker, was attached to the skull just behind the ear. It worked by bone conduction, allowing silent communication between operator and instrument. A real convenience.

It wasn't enough to know this, as Cassal did. He'd talked to the company experts, had seen the symbolical drawings, the plans for an improved version. He needed something better than the best though, that had been planned.

The drawback was this: *Dimanche was powered directly by the nervous system of the body in which it was housed.* Against Murra Foray, he'd be overmatched. She was stronger than he physically, probably also in the production of nervous energy.

One solution was to make available to the new instrument a larger fraction of the neural currents of the body. That was dangerous—a slight miscalculation and the user was dead. Yet he had to have an instrument that would overpower her.

Cassal rubbed his eyes wearily. How could he find some way of supplying additional power?

Abruptly, Cassal sat up. That was the way, of course—an auxiliary power pack that need not be surgeried into his body, extra power that he would use only in emergencies.

Neuronics, Inc., had never done this, had never thought that such an instrument would ever be necessary. They didn't need to overpower their customers. They merely wanted advance informa-

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tion via subvocalized thoughts.

It was easier for Cassal to conceive this idea than to engineer it. At the end of the first day, he knew it would be a slow process.

Twice he postponed deadlines to the manufacturing concerns he'd engaged. He locked himself in his rooms and took Anti-Sleep against the doctor's vigorous protests. In one week he had the necessary drawings, crude but legible. An expert would have to make innumerable corrections, but the intent was plain.

One week. During that time Murra Foray would be growing hourly more proficient in the use of Dimanche.

CASSAL followed the neuronics expert groggily, seventy-two hours sleep still clogging his reactions. Not that he hadn't needed sleep after that week. The Godolphian showed him proudly through the shops, though he wasn't at all interested in their achievements. The only noteworthy aspect was the grand scale of their architecture.

"We did it, though I don't think we'd have taken the job if we'd known how hard it was going to be," the neuronics expert chattered. "It works exactly as you specified. We had to make substitutions, of course, but you understand that was inevitable."

He glanced anxiously at Cassal, who nodded. That was to be expected. Components that were common on Earth wouldn't necessarily be available here. Still, any expert worth his pay could always make the proper combinations and achieve the same results.

Inside the lab, Cassal frowned. "I thought you were keeping my work separate. What is this planetary drive doing here?"

The Godolphian spread his broad hands and looked hurt. "Planetary drive?" He tried to laugh. "This is the instrument you ordered!"

Cassal started. It was supposed to fit under a flap of skin behind his ear. A Three World saurian couldn't carry it.

He turned savagely on the expert. "I told you it had to be small."

"But it is. I quote your orders exactly: 'I'm not familiar with your system of measurement, but make it tiny, very tiny. Figure the size you think it will have to be and cut it in half. And than cut *that* in half.' This is the fraction remaining."

It certainly was. Cassal glanced at the Godolphian's hands. Excellent for swimming. No wonder they built on a grand scale. Broad, blunt, webbed hands weren't exactly suited for precision work.

Valueless. Completely value-

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less. He knew now what he would find at the other lab. He shook his head in dismay, personally saw to it that the instrument was destroyed. He paid for the work and retrieved the plans.

Back in his rooms again, he sat and thought. It was still the only solution. If the Godolphians couldn't do it, he'd have to find some race that could. He grabbed the intercom and jangled it savagely. In half an hour he had a dozen leads.

The best seemed to be the Spirella. A small, insectlike race, about three feet tall, they were supposed to have excellent manual dexterity, and were technically advanced. They sounded as if they were acquainted with the necessary fields. Three lightyears away, they could be reached by readily available local transportation within the day. Their idea of what was small was likely to coincide with his.

He didn't bother to pack. The suite would remain his headquarters. Home was where his enemies were.

He made a mental correction—enemy.

HE rubbed his sensitive ear, grateful for the discomfort. His stomach was sore, but it wouldn't be for long. The Spirella had made the new instrument just as he had wanted it. They had built an even better auxiliary power unit than he had specified. He fingered the flat cases in his pocket. In an emergency, he could draw on these, whereas Murra Foray would be limited to the energy in her nervous system.

What he had now was hardly the same instrument. A Military version of it, perhaps. It didn't seem right to use the same name. Call it something staunch and crisp, suggestive of raw power. Manche. As good a name as any. Manche against Dimanche. Cassal against a queen.

He swung confidently along the walkway beside the transport tide. It was raining. He decided to test the new instrument. The Godolphian across the way bent double and wondered why his knees wouldn't work. They had suddenly become swollen and painful to move. Maybe it was the climate.

And maybe it wasn't, thought Cassal. Eventually the pain would leave, but he hadn't meant to be so rough on the native. He'd have to watch how he used Manche.

He scouted the vicinity of Travelers Aid Bureau, keeping at least one building between him and possible detection. Purely precautionary. There was no indication that Murra Foray had spotted him. For a Huntner, she

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wasn't very alert, apparently.

He sent Manche out on exploration at minimum strength. The electronic guards which Dimanche had spoken of were still in place. Manche went through easily and didn't disturb an electron. Behind the guards there was no trace of the first counselor.

He went closer. Still no warning of danger. The same old technician shuffled in front of the entrance. A horrible thought hit him. It was easy enough to verify. Another "reorganization" *had* taken place. The new sign read:

STAR TRAVELERS AID BUREAU
STAB *Your Hour of Need*
Delly Mortinbras, first counselor

Cassal leaned against the building, unable to understand what it was that frightened and bewildered him. Then it gradually became, if not clear, at least not quite so muddy.

STAB was the word that had been printed on the card in the money clip that his assailant in the alley had left behind. Cassal had naturally interpreted it as an order to the thug. It wasn't, of course.

The first time Cassal had visited the Travelers Aid Bureau, it had been in the process of reorganization. The only purpose of the reorganization, he realized now, had been to change the name so he wouldn't translate the word on the slip into the original initials of the Bureau.

Now it probably didn't matter any more whether or not he knew, so the name had been changed back to Star Travelers Aid Bureau—STAB.

That, he saw bitterly, was why Murra Foray had been so positive that the identification tab he'd made with the aid of Dimanche had been a forgery.

She had known the man who robbed Cassal of the original one, perhaps had even helped him plan the theft.

THAT didn't make sense to Cassal. Yet it had to. He'd suspected the organization of being a racket, but it obviously wasn't. By whatever name it was called, it actually was dedicated to helping the stranded traveler. The question was—which travelers?

There must be agency operatives at the spaceport, checking every likely prospect who arrived, finding out where they were going, whether their papers were in order. Then, just as had happened to Cassal, the prospect was robbed of his papers so somebody stranded here could go on to that destination!

The shabby, aging technician finished changing the last door

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sign and hobbled over to Cassal. He peered through the rain and darkness.

"You stuck here, too?" he quavered.

"No," said Cassal with dignity, shaky dignity. "I'm not stuck. I'm here because I want to be."

"You're crazy," declared the old man. "I remember—"

Cassal didn't wait to find out what it was he remembered. An impossible land, perhaps, a planet which swings in perfect orbit around an ideal sun. A continent which reared a purple mountain range to hold up a honey sky. People with whom anyone could relax easily and without worry or anxiety. In short, his own native world from which, at night, all the constellations were familiar.

Somehow, Cassal managed to get back to his suite, tumbled wearily onto his bed. The showdown wasn't going to take place.

Everyone connected with the agency—including Murra Foray—had been "stuck here" for one reason or another: no identification tab, no money, whatever it was. That was the staff of the Bureau, a pack of desperate castaways. The "philanthropy" extended to them and nobody else. They grabbed their tabs and money from the likeliest travelers, leaving them marooned here—and they in turn had to join the Bureau and use the same methods to continue their journeys through the Galaxy.

It was an endless belt of stranded travelers robbing and stranding other travelers, who then had to rob and strand still others, and so on and on . . .

CASSAL didn't have a chance of catching up with Murra Foray. She had used the time—and Dimanche— to create her own identification tab and escape. She was going back to Kettikat, home of the Huntners, must already be light-years away.

Or was she? The signs on the Bureau had just been changed. Perhaps the ship was still in the spaceport, or cruising along below the speed of light. He shrugged defeatedly. It would do him no good; he could never get on board.

He got up suddenly on one elbow. He couldn't, but Manche could! Unlike his old instrument, it could operate at tremendous distances, its power no longer dependent only on his limited nervous energy.

With calculated fury, he let Manche strike out into space.

"There you are!" exclaimed Murra Foray. "I thought you could do it."

"Did you?" he asked coldly. "Where are you now?"

"Leaving the atmosphere, if

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you can call the stuff around this planet an atmosphere."

"It's not the atmosphere that's bad," he said as nastily as he could. "It's the philanthropy."

"Please don't feel that way," she appealed. "Huntners are rather unusual people, I admit, but sometimes even we need help. I had to have Dimanche and I took it."

"At the risk of killing me."

Her amusement was strange; it held a sort of sadness. "I didn't hurt you. I couldn't. You were too cute, like a—well, the animal native to Kettikat that would be called a teddy bear on Earth. A cute, lovable teddy bear."

"Teddy bear," he repeated, really stung now. "Careful. This

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one may have claws."

"Long claws? Long enough to reach from here to Kettikat?" She was laughing, but it sounded thin and wistful.

Manche struck out at Cassal's unspoken command. The laughter was canceled.

"Now you've done it," said Dimanche. "She's out cold."

There was no reason for remorse; it was strange that he felt it. His throat was dry.

"So you, too, can communicate with me. Through Manche, of course. I built a wonderful instrument, didn't I?"

"A fearful one," said Dimanche sternly. "She's unconscious."

"I heard you the first time." Cassal hesitated. "Is she dead?"

Dimanche investigated. "Of course not. A little thing like that wouldn't hurt her. Her nerve system is marvelous. I think it could carry current for a city. Beautiful!"

"I'm aware of the beauty," said Cassal.

AN awkward silence followed. Dimanche broke it. "Now that I know the facts, I'm proud to be her chosen instrument. Her need was greater than yours."

Cassal growled, "As first counselor, she had access to every—"

"Don't interrupt with your half truths," said Dimanche. "Huntners *are* special; their brain structure, too. Not necessarily better, just different. Only the auditory

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and visual centers of their brains resemble that of man. You can guess the results of even superficial tampering with those parts of her mind. And stolen identification would involve lobotomy."

He could imagine? Cassal shook his head. No, he couldn't. A blinded and deaf Murra Foray would not go back to the home of the Huntners. According to her racial conditioning, a sightless young tiger should creep away and die.

Again there was silence. "No, she's not pretending unconsciousness," announced Dimanche. "For a moment I thought—but never mind."

The conversation was lasting longer than he expected. The ship must be obsolete and slow. There were still a few things he wanted to find out, if there was time.

"When are you going on Drive?" he asked.

"We've been on it for some time," answered Dimanche.

"Repeat that!" said Cassal, stunned.

"I said that we've been on faster-than-light drive for some time. Is there anything wrong with that?"

Nothing wrong with that at all. Theoretically, there was only one means of communicating with a ship hurtling along faster than light, and that way hadn't been invented.

Hadn't been until he had put together the instrument he called Manche.

Unwittingly, he had created far more than he intended. He ought to have felt elated.

Dimanche interrupted his thoughts. "I suppose you know what she thinks of you."

"She made it plain enough," said Cassal wearily. "A teddy bear. A brainless, childish toy."

"Among the Huntners, women are vigorous and aggressive," said Dimanche. The voice grew weaker as the ship, already light-years away, slid into unfathomable distances. "Where words are concerned, morals are very strict. For instance, 'dear' is never used unless the person means it. Huntner men are weak and not overburdened with intelligence."

The voice was barely audible, but it continued: "The principal romantic figure in the dreams of women . . ." Dimanche failed altogether.

"Manche!" cried Cassal.

Manche responded with everything it had. ". . . is the teddy bear."

The elation that had been missing, and the triumph, came now. It was no time for hesitation, and Cassal didn't hesitate. Their actions had been directed against each other, but their emotions, which each had tried to ignore, were real and strong.

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The gravitor dropped him to the ground floor. In a few minutes, Cassal was at the Travelers Aid Bureau.

Correction. Now it was Star Travelers Aid Bureau.

And, though no one but himself knew it, even that was wrong. Quickly he found the old technician.

"There's been a reorganization," said Cassal bluntly. "I want the signs changed."

The old man drew himself up. "Who are you?"

"I've just elected myself," said Cassal. "I'm the new first counselor."

He hoped no one would be foolish enough to challenge him. He wanted an organization that could function immediately, not a hospital full of cripples.

The old man thought about it. He was merely a menial, but he had been with the bureau for a long time. He was nobody, nothing, but he could recognize power when it was near him. He wiped his eyes and shambled out into the fine cold rain. Swiftly the new signs went up.

STAR TRAVELERS AID BUREAU
S. T. A. *with us*
Denton Cassal, first counselor

CASSAL sat at the control center. Every question cubicle was visible at a glance. In addition there was a special panel, direct from the spaceport, which recorded essential data about every newly arrived traveler. He could think of a few minor improvements, but he wouldn't have time to put them into effect. He'd mention them to his assistant, a man with a fine, logical mind. Not really first-rate, of course, but well suited to his secondary position. Every member quickly rose or sank to his proper level in this organization, and this one had, without a struggle.

Business was dull. The last few ships had brought travelers who were bound for unimaginably dreary destinations, nothing he need be concerned with.

He thought about the instrument. It was the addition of power that made the difference. Dimanche plus power equaled Manche, and Manche raised the user far above the level of other men. There was little to fear.

But essentially the real value of Manche lay in this—it was a beginning. Through it, he had communicated with a ship traveling far faster than light. The only one instrument capable of that was instantaneous radio. Actually it wasn't radio, but the old name had stuck to it.

Manche was really a very primitive model of instantaneous radio. It was crude; all first steps were. Limited in range, it was

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practically valueless for that purpose now. Eventually the range would be extended. Hitch a neuronic manufactured brain to human one, add the power of a tiny atomic battery, and Manche was created.

The last step was his share of the invention. Or maybe the credit belonged to Murra Foray. If she hadn't stolen Dimanche, it never would have been necessary to put together the new instrument.

The stern lines on his face relaxed. Murra Foray. He wondered about the marriage customs of the Huntners. He hoped marriage was a custom on Kettikat.

Cassal leaned back; officially, his mission was complete. There was no longer any need to go to Tunney 21. The scientist he was sent to bring back might as well remain there in obscure arrogance. Cassal knew he should return to Earth immediately. But the Galaxy was wide and there were lots of places to go.

Only one he was interested in, though—Kettikat, as far from the center of the Galaxy as Earth, but in the opposite direction, incredibly far away in terms of trouble and transportation. It would be difficult even for a man who had the services of Manche.

Cassal glanced at the board. Someone wanted to go to Zombo.

"Delly," he called to his assistant. "Try 13. This may be what you want to get back to your own planet."

Delly Mortinbras nodded gratefully and cut in.

Cassal continued scanning. There was more to it than he imagined, though he was learning fast. It wasn't enough to have identification, money, and a destination. The right ship might come in with standing room only. Someone had to be "persuaded" that Godolph was a cozy little place, as good as any for an unscheduled stopover.

It wouldn't change appreciably during his lifetime. There were too many billions of stars. First he had to perfect it, isolate from dependence on the human element, and then there would come the installation. A slow process, even with Murra to help him.

Someday he would go back to Earth. He should be welcome. The information he was sending back to his former employers, Neuronics, Inc., would more than compensate them for the loss of Dimanche.

Suddenly he was alert. A report had just come in.

Once upon a time, he thought tenderly, scanning the report, there was a teddy bear that could reach to Kettikat. With claws—but he didn't think they would be needed.

—F. L. WALLACE

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the Snowball effect

By KATHERINE MacLEAN

Tock power drives on a sewing circle and you can needle the world into the darndest mess!

Illustrated by EMSH

"ALL right," I said, "what *is* sociology good for?"

Wilton Caswell, Ph.D., was head of my Sociology Department, and right then he was mad enough to chew nails. On the office wall behind him were three or four framed documents in Latin that were supposed to be signs of great learning, but I didn't care at that moment if he papered the walls with his de-

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grees. I had been appointed dean and president to see to it that the university made money. I had a job to do, and I meant to do it.

He bit off each word with great restraint: "Sociology is the study of social institutions, Mr. Halloway."

I tried to make him understand my position. "Look, it's the big-money men who are supposed to be contributing to the support of this college. To them, sociology sounds like socialism — nothing can sound worse than that—and an institution is where they put Aunt Maggy when she began collecting Wheaties in a stamp album. We can't appeal to them that way. Come on now." I smiled condescendingly, knowing it would irritate him. "What are you doing that's worth anything?"

He glared at me, his white hair bristling and his nostrils dilated like a war horse about to whinny. I can say one thing for them — these scientists and professors always keep themselves well under control. He had a book in his hand and I was expecting him to throw it, but he spoke instead:

"This department's analysis of institutional accretion, by the use of open system mathematics, has been recognized as an outstanding and valuable contribution to—"

The words were impressive, whatever they meant, but this still didn't sound like anything that would pull in money. I interrupted, "Valuable in what way?"

He sat down on the edge of his desk thoughtfully, apparently recovering from the shock of being asked to produce something solid for his position, and ran his eyes over the titles of the books that lined his office walls.

"Well, sociology has been valuable to business in initiating worker efficiency and group motivation studies, which they now use in management decisions. And, of course, since the depression, Washington has been using sociological studies of employment, labor and standards of living as a basis for its general policies of—"

I stopped him with both raised hands. "Please, Professor Caswell! That would hardly be a recommendation. Washington, the New Deal and the present Administration are somewhat touchy subjects to the men I have to deal with. They consider its value debatable, if you know what I mean. If they got the idea that sociology professors are giving advice and guidance— No, we have to stick to brass tacks and leave Washington out of this. What, specifically, has the work of this specific department done that would make it as worthy to

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receive money as—say, a heart disease research fund?"

He began to tap the corner of his book absently on the desk, wacthing me. "Fundamental research doesn't show immediate effects, Mr. Halloway, but its value is recognized."

I smiled and took out my pipe. "All right, tell me about it. Maybe I'll recognize its value."

Prof. Caswell smiled back tightly. He knew his department was at stake. The other departments were popular with donors and pulled in gift money by scholarships and fellowships, and supported their professors and graduate students by research contracts with the government and industry. Caswell had to show a way to make his own department popular — or else. I couldn't fire him directly, of course, but there are ways of doing it indirectly.

HE laid down his book and ran a hand over his ruffled hair.

"Institutions — organizations, that is—" his voice became more resonant; like most professors, when he had to explain something he instinctively slipped into his platform lecture mannerisms, and began to deliver an essay—"have certain tendencies built into the way they happen to have been organized, which cause them to expand or contract without reference to the needs they were founded to serve."

He was becoming flushed with the pleasure of explaining his subject. "All through the ages, it has been a matter of wonder and dismay to men that a simple organization—such as a church to worship in, or a delegation of weapons to a warrior class merely for defense against an outside enemy—will either grow insensately and extend its control until it is a tyranny over their whole lives, or, like other organizations set up to serve a vital need, will tend to repeatedly dwindle and vanish, and have to be painfully rebuilt.

"The reason can be traced to little quirks in the way they were organized, a matter of positive and negative power feedbacks. Such simple questions as, 'Is there a way a holder of authority in this organization can use the power available to him to increase his power?' provide the key. But it still could not be handled until the complex questions of interacting motives and long-range accumulations of minor effects could somehow be simplified and formulated. In working on the problem, I found that the mathematics of open system, as introduced to biology by Ludwig von Bertalanffy and George Kreezer, could be used as a base that would enable me

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to develop a specifically social mathematics, expressing the human factors of intermeshing authority and motives in simple formulas.

"By these formulations, it is possible to determine automatically the amount of growth and period of life of any organization. The UN, to choose an unfortunate example, is a shrinker type organization. Its monetary support is not in the hands of those who personally benefit by its governmental activities, but, instead, in the hands of those who would personally lose by any extension and encroachment of its authority on their own. Yet by the use of formula analysis—"

"That's theory," I said. "How about proof?"

"My equations are already being used in the study of limited-size Federal corporations. Washington—"

I held up my palm again. "Please, not that nasty word again. I mean, where else has it been put into operation? Just a simple demonstration, something to show that it works, that's all."

He looked away from me thoughtfully, picked up the book and began to tap it on the desk again. It had some unreadable title and his name on it in gold letters. I got the distinct impression again that he was repressing an urge to hit me with it.

He spoke quietly. "All right, I'll give you a demonstration. Are you willing to wait six months?"

"Certainly, if you can show me something at the end of that time."

Reminded of time, I glanced at my watch and stood up.

"Could we discuss this over lunch?" he asked.

"I wouldn't mind hearing more, but I'm having lunch with some executors of a millionaire's will. They have to be convinced that by, 'furtherance of research into human ills,' he meant that the money should go to research fellowships for postgraduate biologists at the university, rather than to a medical foundation."

"I see you have your problems, too," Caswell said, conceding me nothing. He extended his hand with a chilly smile. "Well, good afternoon, Mr. Halloway. I'm glad we had this talk."

I shook hands and left him standing there, sure of his place in the progress of science and the respect of his colleagues, yet seething inside because I, the president and dean, had boorishly demanded that he produce something tangible.

I frankly didn't give a hoot if he blew his lid. My job isn't easy. For a crumb of favorable publicity and respect in the newspapers and an annual ceremony in

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a silly costume, I spend the rest of the year going hat in hand, asking politely for money at everyone's door, like a well-dressed panhandler, and trying to manage the university on the dribble I get. As far as I was concerned, a department had to support itself or be cut down to what student tuition pays for, which is a handful of overcrowded courses taught by an assistant lecturer. Caswell had to make it work or get out.

But the more I thought about it, the more I wanted to hear what he was going to do for a demonstration.

AT lunch, three days later, while we were waiting for our order, he opened a small notebook. "Ever hear of feedback effects?"

"Not enough to have it clear."

"You know the snowball effect, though."

"Sure, start a snowball rolling downhill and it grows."

"Well, now—" He wrote a short line of symbols on a blank page and turned the notebook around for me to inspect it. "Here's the formula for the snowball process. It's the basic general growth formula—covers everything."

It was a row of little symbols arranged like an algebra equation. One was a concentric spiral going up, like a cross-section of a snowball rolling in snow. That was a growth sign.

I hadn't expected to understand the equation, but it was almost as clear as a sentence. I was impressed and slightly intimidated by it. He had already explained enough so that I knew that, if he was right, here was the growth of the Catholic Church and the Roman Empire, the conquests of Alexander and the spread of the smoking habit and the change and rigidity of the unwritten law of styles.

"Is it really as simple as that?" I asked.

"You notice," he said, "that when it becomes too heavy for the cohesion strength of snow, it breaks apart. Now in human terms—"

The chops and mashed potatoes and peas arrived.

"Go on," I urged.

He was deep in the symbology of human motives and the equations of human behavior in groups. After running through a few different types of grower and shrinker type organizations, we came back to the snowball, and decided to run the test by making something grow.

"You add the motives," he said, "and the equation will translate them into organization."

"How about a good selfish reason for the ins to drag others into the group—some sort of bounty

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on new members, a cut of their membership fee?" I suggested uncertainly, feeling slightly foolish. "And maybe a reason why the members would lose if any of them resigned, and some indirect way they could use to force each other to stay in."

"The first is the chain letter principle," he nodded. "I've got that. The other . . ." He put the symbols through some mathematical manipulation so that a special grouping appeared in the middle of the equation. "That's it."

Since I seemed to have the right idea, I suggested some more, and he added some, and juggled them around in different patterns. We threw out a few that would have made the organization too complicated, and finally worked out an idyllically simple and deadly little organization setup where joining had all the temptation of buying a sweepstakes ticket, going in deeper was as easy as hanging around a race track, and getting out was like trying to pull free from a Malayan thumb trap. We put our heads closer together and talked lower, picking the best place for the demonstration.

"Abington?"

"How about Watashaw? I have some student sociological surveys of it already. We can pick a suitable group from that."

"This demonstration has got to be convincing. We'd better pick a little group that no one in his right mind would expect to grow."

"There should be a suitable club—"

Picture Professor Caswell, head of the Department of Sociology, and with him the President of the University, leaning across the table toward each other, sipping coffee and talking in conspiratorial tones over something they were writing in a notebook.

That was us.

"LADIES," said the skinny female chairman of the Watashaw Sewing Circle. "Today we have guests." She signaled for us to rise, and we stood up, bowing to polite applause and smiles. "Professor Caswell, and Professor Smith." (My alias.) "They are making a survey of the methods and duties of the clubs of Watashaw."

We sat down to another ripple of applause and slightly wider smiles, and then the meeting of the Watashaw Sewing Circle began. In five minutes I began to feel sleepy.

There were only about thirty people there, and it was a small room, not the halls of Congress, but they discussed their business of collecting and repairing second hand clothing for charity with

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the same endless boring parliamentary formality.

I pointed out to Caswell the member I thought would be the natural leader, a tall, well-built woman in a green suit, with conscious gestures and a resonant, penetrating voice, and then went into a half doze while Caswell stayed awake beside me and wrote in his notebook. After a while the resonant voice roused me to attention for a moment. It was the tall woman holding the floor over some collective dereliction of the club. She was being scathing.

I nudged Caswell and murmured, "Did you fix it so that a shover has a better chance of getting into office than a non-shover?"

"I think there's a way they could find for it," Caswell whispered back, and went to work on his equation again. "Yes, several ways to bias the elections."

"Good. Point them out tactfully to the one you select. Not as if she'd use such methods, but just as an example of the reason why only *she* can be trusted with initiating the change. Just mention all the personal advantages an unscrupulous person could have."

He nodded, keeping a straight and sober face as if we were exchanging admiring remarks about the techniques of clothes repairing, instead of conspiring.

After the meeting, Caswell drew the tall woman in the green suit aside and spoke to her confidentially, showing her the diagram of organization we had drawn up. I saw the responsive glitter in the woman's eyes and knew she was hooked.

We left the diagram of organization and our typed copy of the new bylaws with her and went off soberly, as befitted two social science experimenters. We didn't start laughing until our car passed the town limits and began the climb for University Heights.

If Caswell's equations meant anything at all, we had given that sewing circle more growth drives than the Roman Empire.

FOUR months later I had time out from a very busy schedule to wonder how the test was coming along. Passing Caswell's office, I put my head in. He looked up from a student research paper he was correcting.

"Caswell, about that sewing club business—I'm beginning to feel the suspense. Could I get an advance report on how it's coming?"

"I'm not following it. We're supposed to let it run the full six months."

"But I'm curious. Could I get in touch with that woman—what's her name?"

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"Searles. Mrs. George Searles."

"Would that change the results?"

"Not in the slightest. If you want to graph the membership rise, it should be going up in a log curve, probably doubling every so often."

I grinned. "If it's not rising, you're fired."

He grinned back. "If it's not rising, you won't have to fire me —I'll burn my books and shoot myself."

I returned to my office and put in a call to Watashaw.

While I was waiting for the phone to be answered, I took a piece of graph paper and ruled it off into six sections, one for each month. After the phone had rung in the distance for a long time, a servant answered with a bored drawl:

"Mrs. Searles' residence."

I picked up a red gummed star and licked it.

"Mrs. Searles, please."

"She's not in just now. Could I take a message?"

I placed the star at the thirty line in the beginning of the first section. Thirty members they'd started with.

"No, thanks. Could you tell me when she'll be back?"

"Not until dinner. She's at the meetin'."

"The sewing club?" I asked.

"No, *sir,* not that thing. There isn't any sewing club any more, not for a long time. She's at the Civic Welfare meeting."

Somehow I hadn't expected anything like that.

"Thank you," I said and hung up, and after a moment noticed I was holding a box of red gummed stars in my hand. I closed it and put it down on top of the graph of membership in the sewing circle. No more members . . .

Poor Caswell. The bet between us was ironclad. He wouldn't let me back down on it even if I wanted to. He'd probably quit before I put through the first slow move to fire him. His professional pride would be shattered, sunk without a trace. I remembered what he said about shooting himself. It had seemed funny to both of us at the time, but . . . What a mess *that* would make for the university.

I had to talk to Mrs. Searles. Perhaps there was some outside reason why the club had disbanded. Perhaps it had not just died.

I called back. "This is Professor Smith," I said, giving the alias I had used before. "I called a few minutes ago. When did you say Mrs. Searles will return?"

"About six-thirty or seven o'clock."

Five hours to wait.

And what if Caswell asked me

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what I had found out in the meantime? I didn't want to tell him anything until I had talked it over with that woman Searles first.

"Where is this Civic Welfare meeting?"

She told me.

Five minutes later, I was in my car, heading for Watashaw, driving considerably faster than my usual speed and keeping a careful watch for highway patrol cars as the speedometer climbed.

THE town meeting hall and theater was a big place, probably with lots of small rooms for different clubs. I went in through the center door and found myself in the huge central hall where some sort of rally was being held. A political-type rally—you know, cheers and chants, with bunting already down on the floor, people holding banners, and plenty of enthusiasm and excitement in the air. Someone was making a speech up on the platform. Most of the people there were women.

I wondered how the Civic Welfare League could dare hold its meeting at the same time as a political rally that could pull its members away. The group with Mrs. Searles was probably holding a shrunken and almost memberless meeting somewhere in an upper room.

There probably was a side door that would lead upstairs.

While I glanced around, a pretty girl usher put a printed bulletin in my hand, whispering, "Here's one of the new copies." As I attempted to hand it back, she retreated. "Oh, you can keep it. It's the new one. Everyone's supposed to have it. We've just printed up six thousand copies to make sure there'll be enough to last."

The tall woman on the platform had been making a driving, forceful speech about some plans for rebuilding Watashaw's slum section. It began to penetrate my mind dimly as I glanced down at the bulletin in my hands.

"Civic Welfare League of Watashaw. The United Organization of Church and Secular Charities." That's what it said. Below began the rules of membership.

I looked up. The speaker, with a clear, determined voice and conscious, forceful gestures, had entered the home-stretch of her speech, an appeal to the civic pride of all citizens of Watashaw.

"With a bright and glorious future—potentially without poor and without uncared-for ill—potentially with no ugliness, no vistas which are not beautiful—the best people in the best planned town in the country—the jewel of the United States."

She paused and then leaned forward intensely, striking her

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clenched hand on the speaker's stand with each word for emphasis.

"All we need is more members. Now get out there and recruit!"

I finally recognized Mrs. Searles, as an answering sudden blast of sound half deafened me. The crowd was chanting at the top of its lungs: "Recruit! Recruit!"

Mrs. Searles stood still at the speaker's table and behind her, seated in a row of chairs, was a group that was probably the board of directors. It was mostly women, and the women began to look vaguely familiar, as if they could be members of the sewing circle.

I put my lips close to the ear of the pretty usher while I turned over the stiff printed bulletin on a hunch. "How long has the League been organized?" On the back of the bulletin was a constitution.

She was cheering with the crowd, her eyes sparkling. "I don't know," she answered between cheers. "I only joined two days ago. Isn't it wonderful?"

I went into the quiet outer air and got into my car with my skin prickling. Even as I drove away, I could hear them. They were singing some kind of organization song with the tune of "Marching through Georgia."

Even at the single glance I had given it, the constitution looked exactly like the one we had given the Watashaw Sewing Circle.

All I told Caswell when I got back was that the sewing circle had changed its name and the membership seemed to be rising.

NEXT day, after calling Mrs. Searles, I placed some red stars on my graph for the first three months. They made a nice curve, rising more steeply as it reached the fourth month. They had picked up their first increase in membership simply by amalgamating with all the other types of charity organizations in Watashaw, changing the club name with each fusion, but keeping the same constitution—the constitution with the bright promise of advantages as long as there were always new members being brought in.

By the fifth month, the League had added a mutual baby-sitting service and had induced the local school board to add a nursery school to the town service, so as to free more women for League activity. But charity must have been completely organized by then, and expansion had to be in other directions.

Some real estate agents evidently had been drawn into the whirlpool early, along with their ideas. The slum improvement plans began to blossom and take

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on a tinge of real estate planning later in the month.

The first day of the sixth month, a big two page spread appeared in the local paper of a mass meeting which had approved a full-fledged scheme for slum clearance of Watashaw's shack-town section, plus plans for rehousing, civic building, and rezoning. *And* good prospects for attracting some new industries to the town, industries which had already been contacted and seemed interested by the privileges offered.

And with all this, an arrangement for securing and distributing to the club members *alone* most of the profit that would come to the town in the form of a rise in the price of building sites and a boom in the building industry. The profit distributing arrangement was the same one that had been built into the organization plan for the distribution of the small profits of membership fees and honorary promotions. It was becoming an openly profitable business. Membership was rising more rapidly now.

By the second week of the sixth month, news appeared in the local paper that the club had filed an application to incorporate itself as the Watashaw Mutual Trade and Civic Development Corporation, and all the local real estate promoters had finished joining en masse. The Mutual Trade part sounded to me as if the Chamber of Commerce was on the point of being pulled in with them, ideas, ambitions and all.

I chuckled while reading the next page of the paper, on which a local politician was reported as having addressed the club with a long flowery oration on their enterprise, charity, and civic spirit. He had been made an honorary member. If he allowed himself to be made a *full* member with its contractual obligations and its lures, if the politicians went into this, too . . .

I laughed, filing the newspaper with the other documents on the Watashaw test. These proofs would fascinate any businessman with the sense to see where his bread was buttered. A businessman is constantly dealing with organizations, including his own, and finding them either inert, cantankerous, or both. Caswell's formula could be a handle to grasp them with. Gratitude alone would bring money into the university in carload lots.

THE end of the sixth month came. The test was over and the end reports were spectacular. Caswell's formulas were proven to the hilt.

After reading the last news-

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paper reports, I called him up.

"Perfect, Wilt, *perfect!* I can use this Watashaw thing to get you so many fellowships and scholarships and grants for your department that you'll think it's snowing money!"

He answered somewhat disinterestedly, "I've been busy working with students on their research papers and marking tests — not following the Watashaw business at all, I'm afraid. You say the demonstration went well and you're satisfied?"

He was definitely putting on a chill. We were friends now, but obviously he was still peeved whenever he was reminded that I had doubted that his theory could work. And he was using its success to rub my nose in the realization that I had been wrong. A man with a string of degrees after his name is just as human as anyone else. I had needled him pretty hard that first time.

"I'm satisfied," I acknowledged. "I was wrong. The formulas work beautifully. Come over and see my file of documents on it if you want a boost for your ego. Now let's see the formula for stopping it."

He sounded cheerful again. "I didn't complicate that organization with negatives. I wanted it to *grow*. It falls apart naturally when it stops growing for more than two months. It's like the great stock boom before an economic crash. Everyone in it is prosperous as long as the prices just keep going up and new buyers come into the market, but they all knew what would happen if it stopped growing. You remember, we built in as one of the incentives that the members know they are going to lose if membership stops growing. Why, if I tried to stop it now, they'd cut my throat."

I remembered the drive and frenzy of the crowd in the one early meeting I had seen. They probably would.

"No," he continued. "We'll just let it play out to the end of its tether and die of old age."

"When will that be?"

"It can't grow past the female population of the town. There are only so many women in Watashaw, and some of them don't like sewing."

The graph on the desk before me began to look sinister. Surely Caswell must have made some provision for—

"You underestimate their ingenuity," I said into the phone. "Since they wanted to expand, they didn't stick to sewing. They went from general charity to social welfare schemes to something that's pretty close to an incorporated government. The name is now the Watashaw Mutual Trade

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and Civic Development Corporation, and they're filing an application to change it to Civic Property Pool and Social Dividend, membership contractual, open to all. That social dividend sounds like a Technocrat climbed on the band wagon, eh?"

While I spoke, I carefully added another red star to the curve above the thousand member level, checking with the newspaper that still lay open on my desk. The curve was definitely some sort of log curve now, growing more rapidly with each increase.

"Leaving out practical limitations for a moment, where does the formula say it will stop?" I asked.

"When you run out of people to join it. But after all, there are only so many people in Watashaw. It's a pretty small town."

"THEY'VE opened a branch office in New York," I said carefully into the phone, a few weeks later.

With my pencil, very carefully, I extended the membership curve from where it was then.

After the next doubling, the curve went almost straight up and off the page.

Allowing for a lag of contagion from one nation to another, depending on how much their citizens intermingled, I'd give the rest of the world about twelve years.

There was a long silence while Caswell probably drew the same graph in his own mind. Then he laughed weakly. "Well, you asked me for a demonstration."

That was as good an answer as any. We got together and had lunch in a bar, if you can call it lunch. The movement we started will expand by hook or by crook, by seduction or by bribery or by propaganda or by conquest, but it will expand. And maybe a total world government will be a fine thing—until it hits the end of its rope in twelve years or so.

What happens then, I don't know.

But I don't want anyone to pin that on me. From now on, if anyone asks me, I've never heard of Watashaw.

—KATHERINE MacLEAN

The 10th anniversary World Science Fiction Convention will be held at the Hotel Morrison in Chicago on August 30, 31 and September 1, 1952. You'll meet your favorite editors, writers and illustrators. Send $1 for membership to Box 1422, Chicago 90, Illinois. You'll get a piece of the moon and full information in return!

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Today is Forever

By ROGER DEE

Illustrated by EMSH

Boyle knew there was an angle behind the aliens' generosity . . . but he had one of his own!

"THESE Alcorians have been on Earth for only a month," David Locke said, "but already they're driving a wedge between AL&O and the Social Body that can destroy the Weal overnight. Boyle, it's got to be stopped!"

He put his elbows on Moira's antique conversation table and leaned toward the older man, his eyes hot and anxious.

"There are only the two of them—Fermiirig and Santikh;

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you've probably seen stills of them on the visinews a hundred times—and AL&O has kept them so closely under cover that we of the Social Body never get more than occasional rumors about what they're really like. But I know from what I overheard that they're carbonstructure oxygen-breathers with a metabolism very much like our own. What affects them physically will affect us also. And the offer they've made Cornelison and Bissell and Dorand of Administrative Council is genuine. It amounts to a lot more than simple longevity, because the process can be repeated. In effect, it's—"

"*Immortality,*" Boyle said, and forgot the younger man on the instant.

The shock of it as a reality blossomed in his mind with a slow explosion of triumph. It had come in his time, after all, and the fact that the secret belonged to the first interstellar visitors to reach Earth had no bearing whatever on his determination to possess it. Neither had the knowledge that the Alcorians had promised the process only to the highest of government bodies, Administrative Council. The whole of AL&O—Administration, Legislation and Order—could not keep it from him.

"It isn't *right,*" Locke said heatedly. "It doesn't fit in with what we've been taught to believe, Boyle. We're still a modified democracy, and the Social Body *is* the Weal. We can't permit Cornelison and Bissell and Dorand to take what amounts to immortality for themselves and deny it to the populace. That's tyranny!"

The charge brought Boyle out of his preoccupation with a start. For the moment, he had forgotten Locke's presence in Moira's apartment. He had even forgotten his earlier annoyance with Moira for allowing the sophomoric fool visitor's privilege when it was Boyle's week, to the exclusion of the other two husbands in Moira's marital-seven, to share the connubial right with her.

But the opportunity tumbled so forcibly into his lap was not one to be handled lightly. He held in check his contempt for Locke and his irritation with Moira until he had considered his windfall from every angle, and had marshalled its possibilities into a working outline of his coup to come.

He even checked his lapel watch against the time of Moira's return from the theater before he answered Locke. With characteristic cynicism, he took it for granted that Locke, in his indignation, had already shared his discovery with Moira, and in cold logic he marked her down

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with Locke for disposal once her purpose was served. Moira had been the most satisfactory of the four women in Boyle's marital-seven, but when he weighed her attractions against the possible immortality ahead, the comparison did not sway his resolution for an instant.

Moira, like Locke, would have to go.

"YOU'RE sure there was no error?" Boyle asked. "You couldn't have been mistaken?"

"I heard it," Locke said stubbornly.

He clenched his fists angrily, patently reliving his shock of discovery. "I was running a routine check on Administration visiphone channels—it's part of my work as communications technician at AL&O—when I ran across a circuit that had blown its scrambler. Ordinarily I'd have replaced the dead unit without listening to plain-talk longer than was necessary to identify the circuit. But by the time I had it tagged as a Council channel, I'd heard enough from Cornelison and Bissell and Dorand to convince me that I owed it to the Social Body to hear the rest. And now I'm holding a tiger by the tail, because I'm subject to truth-check. That's why I came to you with this, Boyle. Naturally, since you are President of Transplanet Enterprises—"

"I know." Boyle cut in, forestalling digression. Locke's job, not intrinsically important in itself, still demanded a high degree of integrity and left him open to serum-and-psycho check, as though he were an actual member of AL&O or a politician. "If anyone knew what you've overheard, you'd get a compulsory truth-check, admit your guilt publicly and take an imprisonment sentence from the Board of Order. But your duty came first, of course. Go on."

"They were discussing the Alcorians' offer of longevity when I cut into the circuit. Bissell and Dorand were all for accepting at once, but Cornelison pretended indecision and had to be coaxed. Oh, he came around quickly enough; the three of them are to meet Fermiirig and Santikh tomorrow morning at nine in the AL&O deliberations chamber for their injections. You should have heard them rationalizing that, Boyle. It would have sickened you."

"I know the routine—they're doing it for the good of the Social Body, of course. What puzzles me is why the Alcorians should give away a secret so valuable."

"Trojan horse tactics," Locke said flatly. "They claim to have arrived at a culture pretty much like our own, except for a superi-

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or technology and a custom of prolonging the lives of administrators they find best fitted to govern. They're posing as philanthropists by offering us the same opportunity, but actually they're sabotaging our political economy. They know that the Social Body won't stand for the Council accepting an immortality restricted to itself. That sort of discrimination would stir up a brawl that might shatter the Weal forever."

Deliberately, Boyle fanned the younger man's resentment. "Not a bad thing for those in power. But it *is* rough on simple members of the Social Body like ourselves, isn't it?"

"It's criminal conspiracy," Locke said hotly. "They should be truth-checked and given life-maximum detention. If we took this to the Board of Order—"

"No. Think a moment and you'll understand why."

Boyle had gauged his man, he saw, to a nicety. Locke was typical of this latest generation, packed to the ears with juvenile idealism and social consciousness, presenting a finished product of AL&O's golden-rule ideology that was no more difficult to predict than a textbook problem in elementary psychology. To a veteran strategist like Boyle, Locke was more than a handy asset; he was a tool shaped to respond to duty unquestioningly and to cupidity not at all, and therefore an agent more readily amenable than any mercenary could have been.

"But I *don't* understand," Locke said, puzzled. "Even Administration and Legislation are answerable to Order. It's the Board's duty to bring them to account if necessary."

"Administration couldn't possibly confirm itself in power from the beginning without the backing of Order and Legislation," Boyle pointed out. "Cornelison and Bissell and Dorand would have to extend the longevity privilege to the other two groups, don't you see, in order to protect themselves. And that means that Administrative Council is not alone in this thing—it's AL&O as a body. If you went to the Board of Order with your protest, the report would die on the spot. So, probably, would you."

HE felt a touch of genuine amusement at Locke's slack stare of horror. The seed was planted; now to see how readily the fool would react to a logical alternative, and how useful in his reaction he might be.

"I know precisely how you feel," Boyle said. "It goes against our conditioned grain to find officials venal in this day of compulsory honesty. But it's nothing new; I've met with similar oc-

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casions in my own Transplanet business, Locke."

He might have added that those occasions had been of his own devising and that they had brought him close more than once to a punitive truth-check. The restraining threat of serum-and-psycho had kept him for the greater part of his adult life in the ranks of the merely rich, a potential industrial czar balked of financial empire by the necessity of maintaining a strictly legal status.

Locke shook himself like a man waking out of nightmare.

"I'm glad I brought this problem to a man of your experience," he said frankly. "I've got great confidence in your judgment, Boyle, something I've learned partly from watching you handle Transplanet Enterprises and partly from talking with Moira."

Boyle gave him a speculative look, feeling a return of his first acid curiosity about Locke and Moira. "I had no idea that Moira was so confidential outside her marital-seven," he said dryly. "She's not by any chance considering a *fourth* husband, is she?"

"Of course not. Moira's not *unconventional*. She's been kind to me a few times, yes, but that's only her way of making a practical check against the future. After all, she's aware it can't be more than a matter of—"

He broke off, too embarrassed by his unintentional blunder to see the fury that discolored the older man's face.

The iron discipline that permitted Boyle to bring that fury under control left him, even in his moment of outrage, with a sense of grim pride. He was still master of himself and of Transplanet Enterprises. Given fools enough like this to work with and time enough to use them, and he would be master of a great deal more. Immortality, for instance.

"She's quite right to be provident, of course," he said equably. "I *am* getting old. I'm past the sixty-mark, and it can't be more than another year or two before the rejuvenators refuse me further privilege and I'm dropped from the marital lists for good."

"Damn it, Boyle, I'm sorry," Locke said. "I didn't mean to offend you."

The potential awkwardness of the moment was relieved by a soft chime from the annunciator. The apartment entrance dilated, admitting Moira.

She came to them directly, slender and poised and supremely confident of her dark young beauty, her ermine wrap and high-coiled hair glistening with stray raindrops that took the light like diamonds. The two men stood up to greet her, and

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Boyle could not miss the subtle feminine response of her to Locke's eager, athletic youth.

If she's planning to fill my place in her marital-seven with this crewcut fool, Boyle thought with sudden malice, *then she's in for a rude shock. And a final one.*

"I couldn't enjoy a line of the play for thinking of you two patriots plotting here in my apartment," Moira said. "But then the performance was shatteringly dull, anyway."

Her boredom was less than convincing. When she had hung her wrap in a closet to be aerated and irradiated against its next wearing, she sat between Boyle and Locke with a little sigh of anticipation.

"Have you decided yet what to do about this dreadful immortality scheme of the Councils, darlings?"

BOYLE went to the auto-dispenser in a corner and brought back three drinks, frosted and effervescing. They touched rims. Moira sipped at her glass quietly, waiting in tacit agreement with Locke for the older man's opinion.

"This longevity should be available to the Social Body as well as to AL&O," Boyle said. "It's obvious even to non-politicals like Locke and myself that, unless equal privilege is maintained, there's going to be the devil to pay and the Weal will suffer. It's equally obvious that the Alcorians' offer is made with the deliberate intent of undermining our system through dissension."

"To their own profit, of course," Locke put in. "Divide and conquer . . ."

"Whatever is to be done must be done quickly," Boyle said. "It would take months to negotiate a definitive plebiscite, and in that time the Alcorians would have gone home again without treating anyone outside AL&O. And there the matter would rest. It seems to be up to us to get hold of the longevity process ourselves and to broadcast it to the public."

"The good of the Body is the preservation of the Weal," Locke said sententiously. "What do you think, Moira?"

Moira touched her lips with a delicate pink tongue-tip, considering. To Boyle, her process of thought was as open as a plain-talk teletape; immortality for the Social Body automatically meant immortality for Moira and for David Locke. Both young, with an indefinite guarantee of life . . .

"Yes," Moira said definitely. "If some have it, then all should. But how, Philip?"

"You're both too young to remember this, of course," Boyle

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said, "but until the 1980 Truth-check Act, there was a whole field of determinative action applicable to cases like this. It's a simple enough problem if we plan and execute it properly."

His confidence was not feigned; he had gone over the possibilities already with the swift ruthlessness that had made him head of Transplanet Enterprises, and the prospect of direct action excited rather than dismayed him. Until now he had skirted the edges of illegality with painstaking care, never stepping quite over the line beyond which he would be liable to the disastrous truth-check, but at this moment he felt himself invincible, above retaliation.

"This present culture is a pragmatic compromise with necessity," Boyle said. "It survives because it answers natural problems that couldn't be solved under the old systems. Nationalism died out, for example, when we set up a universal government, because everyone belonged to the same Social Body and had the same Weal to consider. Once we realized that the good of the Body is more important than personal privacy, the truth-check made ordinary crime and political machination obsolete. Racial antagonisms vanished under deliberate amalgamation. Monogamy gave way to the marital-seven, settling the problems of ego clash, incompatability, promiscuity and vice that existed before. It also settled the disproportion between the male and female population.

"But stability is vulnerable. Since it never changes, it cannot stand against an attack either too new or too old for its immediate experience. So if we're going after this Alcorian longevity process, I'd suggest that we choose a method so long out of date that there's no longer a defense against it. *We'll take it by force!*"

IT amused him to see Moira and Locke accept his specious logic without reservation. Their directness was all but childlike. The thought of engaging personally in the sort of cloak-and-sword adventure carried over by the old twentieth-century melodrama tapes was, as he had surmised, irresistible to them.

"I can see how you came to be head of Transplanet, Boyle," Locke said enviously. "What's your plan, exactly?"

"I've a cottage in the mountains that will serve as a base of operations," Boyle explained. "Moira can wait there for us in the morning while you and I take a 'copter to AL&O. According to your information, Cornelison and Bissell and Dorand will meet the Alcorians in the deliberations chamber at nine o'clock.

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We'll sleep-gas the lot of them, take the longevity process and go. There's no formal guard at Administration, or anywhere else, nowadays. There'll be no possible way of tracing us."

"Unless we're truth-checked," Locke said doubtfully. "If any one of us should be pulled in for serum-and-psycho, the whole affair will come out. The Board of Order—"

"Order won't know whom to suspect," Boyle said patiently. "And they can't possibly check the whole city. They'd have no way of knowing even that it was someone from this locale. It could be anyone, from anywhere."

WHEN Locke had gone and Moira had exhausted her fund of excited small talk, Boyle went over the entire plan again from inception to conclusion. Lying awake in the darkness with only the sound of Moira's even breathing breaking the stillness, he let his practical fancy run ahead.

Years, decades, generations—what were they? To be by relative standards undying in a world of ephemerae, with literally nothing that he might not have or do . . .

He dreamed a dream as old as man, of stretching today into forever.

Immortality.

THE coup next morning was no more difficult, though bloodier, than Boyle had anticipated.

At nine sharp, he left David Locke at the controls of his helicar on the sun-bright roof landing of AL&O, took a self-service elevator down four floors and walked calmly to the deliberation chamber where Administrative Council met with the visitors from Alcor. He was armed for any eventuality with an electronic freeze-gun, a sleep-capsule of anesthetic gas, and a nut-sized incendiary bomb capable of setting afire an ordinary building.

His first hope of surprising the Council in conference was dashed in the antechamber, rendering his sleep-bomb useless. Dorand was a moment late; he came in almost on Boyle's heels, his face blank with astonishment at finding an intruder ahead of him.

The freeze-gun gave him no time for questions.

"Quiet," Boyle ordered, and drove the startled Councilor ahead of him into the deliberations chamber.

He was just in time. Cornelison had one bony arm already bared for the longevity injection; Bissell sat in tense anticipation of his elder's reaction; the Alcorian, Fermiirig, stood at Cornelison's side with a glittering hypodermic needle in one of his four three-

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fingered hands.

For the moment, a sudden chill of apprehension touched Boyle. There should have been *two* Alcorians.

"Quiet," Boyle said again, this time to the group. "You, Fermiirig, where is your mate?"

The Alcorian replaced the hypodermic needle carefully in its case, his triangular face totally free of any identifiable emotion and clasped both primary and secondary sets of hands together as an Earthman might have raised them overhead. His eyes, doe-soft and gentle, considered Boyle thoughtfully.

"Santikh is busy with other matters," Fermiirig said. His voice was thin and reedy, precise of enunciation, but hissing faintly on the aspirants. "I am to join her later—" his gentle eyes went to the Councilors, gauging the gravity of the situation from their tensity, and returned to Boyle—"if I am permitted."

"Good," Boyle said.

He snapped the serum case shut and tucked it under his arm, turning toward the open balcony windows. "You're coming with me, Fermiirig. You others stay as you are."

The soft drone of a helicar descending outside told him that Locke had timed his descent accurately. Cornelison chose that moment to protest, his wrinkled face tight with consternation at what he read of Boyle's intention.

"We know you, Boyle! You can't possibly escape. The Ordermen—"

Boyle laughed at him.

"There'll be no culprit for the Ordermen," he said, "nor any witnesses. You've wiped out ordinary crime with your truth-checks and practicalities, Cornelison, but you've made the way easier for a man who knows what he wants."

He pressed the firing stud of his weapon. Cornelison fell and lay stiffly on the pastel tile. Bissell and Dorand went down as quickly, frozen to temporary rigidity.

Boyle tossed his incendiary into the huddle of still bodies and shoved the Alcorian forcibly through the windows into the hovering aircar.

Locke greeted the alien's appearance with stark amazement. "My God, Boyle, are you *mad?* You can't kidnap—"

The dull shock of explosion inside the deliberations chamber jarred the helicar, throwing the slighter Alcorian to the floor and staggering Boyle briefly.

"Get us out of here," Boyle said sharply. He turned the freeze-gun on the astounded Locke, half expecting resistance and fully prepared to meet it. "You fool, do you think I'm still

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playing the childish game I made up to keep you and Moira quiet?"

A pall of greasy black smoke poured after them when Locke, still stunned by the suddenness of catastrophe, put the aircar into motion and streaked away across the city.

Boyle, watching the first red tongue of flame lick out from the building behind, patted the serum case and set himself for the next step.

Immortality.

LOCKE took the helicar down through the mountains, skirting a clear swift river that broke into tumultous falls a hundred yards below Boyle's cottage, and set it down in a flagstone court.

"Out," Boyle ordered.

Moira met them in the spacious living room, her pretty face comical with surprise and dismay.

"Philip, what's *happened?* You look so—"

She saw the alien then and put a hand to her mouth.

"Keep her quiet while I deal with Fermiirig," Boyle said to Locke. "I have no time for argument. If either of you gives me any trouble . . ."

He left the threat to Locke's stunned fancy and turned on the Alcorian.

"Let me have the injection you had ready for Cornelison. Now."

The Alcorian moved his narrow shoulders in what might have been a shrug. "You are making a mistake. You are not fitted for life beyond the normal span."

"I didn't bring you here to moralize," Boyle said. "If you mean to see your mate again, Fermiirig, give me the injection!"

"There was a time in your history when force was justifiable," Fermiirig said. "But that time is gone. You are determined?" He shook his head soberly when Boyle did not answer. "I was afraid so."

He took the hypodermic needle out of its case, squeezed out a pale drop of liquid and slid the point into the exposed vein of Boyle's forearm.

Boyle, watching the slow depression of the plunger, asked: "How long a period will this guarantee, in Earth time?"

"Seven hundred years," Fermiirig said. He withdrew the instrument and replaced it in its case, his liquid glance following Boyle's rising gesture with the freeze-gun. "At the end of that time, the treatment may be renewed if facilities are available."

Immortality!

"Then I won't need you any more," Boyle said, and rayed him down. "Nor these other two."

Locke, characteristically, sprang up and tried to shield Moira with his own body. "Boyle, what are you thinking of? You

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can't murder us without—"

"There's a very effective rapids a hundred yards down river," Boyle said. "You'll both be quite satisfactorily dead after going through it, I think. Possibly unrecognizable, too, though that doesn't matter particularly."

He was pressing the firing stud, slowly because something in the tension of the moment appealed to the sadism in his nature, when an Orderman's freeze-beam caught him from behind and dropped him stiffly beside Fermiirig.

THE details of his failure reached him later in his cell, anticlimactically, through a fat and pimply jailer inflated to bursting with the importance of guarding the first murderer in his generation.

"AL&O kept this quiet until the Council killing," the turnkey said, "but it had to come out when the Board of Order went after you. The Alcorians are telepathic. Santikh led the Ordermen to your place in the mountains. Fermiirig guided her."

He grinned vacuously at his prisoner, visibly pleased to impart information. "Lucky for you we don't have capital punishment any more. As it is, you'll get maximum, but they can't give you more than life."

Lucky? The realization of what lay ahead of him stunned Boyle with a slow and dreadful certainty.

A sentence of life.
Seven hundred years.
Not immortality—
Eternity.

—ROGER DEE

FORECAST

The October issue is a special occasion—the beginning of GALAXY'S third year—and that means something special in the way of story lineup.

Theodore Sturgeon leads off with a strange and powerful novella about a boy whose age kept shifting unaccountably . . . supported by the first appearance in GALAXY of Eric Frank Russell and Hal Clement, each represented by a novelet . . . and short stories, Willy Ley's science department, and our regular features . . . every item complete.

It's a gala issue to start a year loaded with even more fiction surprises than our first two! Even the cover is extra unusual: we call it GALAXY's GALAXY; it will include pictures of many of the top authors and artists in the Science Fiction field attending our Science Fiction Birthday Party.

If you don't have a subscription, this is a fine time to send one in.

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THE MOONS OF MARS

By DEAN EVANS

Every boy should be able to whistle, except, of course, Martians. But this one did!

Illustrated by WILLER

HE seemed a very little boy to be carrying so large a butterfly net. He swung it in his chubby right fist as he walked, and at first glance you couldn't be sure if he were carrying it, or it carrying *him*.

He came whistling. All little boys whistle. To little boys, whistling is as natural as breathing. However, there was something peculiar about this particular little boy's whistling. Or, rather, there were two things peculiar, but each was related to the other.

The first was that he was a Martian little boy. You could be very sure of that, for Earth little

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boys have earlobes while Martian little boys do not—and he most certainly didn't.

The second was the tune he whistled — a somehow familiar tune, but one which I should have thought not very appealing to a little boy.

"Hi, there," I said when he came near enough. "What's that you're whistling?"

He stopped whistling and he stopped walking, both at the same time, as though he had pulled a switch or turned a tap that shut them off. Then he lifted his little head and stared up into my eyes.

"'The Calm'," he said in a sober, little-boy voice.

"The *what?*" I asked.

"From the William Tell Overture," he explained, still looking up at me. He said it deadpan, and his wide brown eyes never once batted.

"Oh," I said. "And where did you learn that?"

"My mother taught me."

I blinked at him. He didn't blink back. His round little face still held no expression, but if it had, I knew it would have matched the title of the tune he whistled.

"You whistle very well," I told him.

That pleased him. His eyes lit up and an almost-smile flirted with the corners of his small mouth.

He nodded grave agreement.

"Been after butterflies, I see. I'll bet you didn't get any. This is the wrong season."

The light in his eyes snapped off. "Well, good-by," he said abruptly and very relevantly.

"Good-by," I said.

His whistling and his walking started up again in the same spot where they had left off. I mean the note he resumed on was the note which followed the one interrupted; and the step he took was with the left foot, which was the one he would have used if I hadn't stopped him. I followed him with my eyes. An unusual little boy. A most precisely *mechanical* little boy.

When he was almost out of sight, I took off after him, wondering.

The house he went into was over in that crumbling section which forms a curving boundary line, marking the limits of those frantic and ugly original mine-workings made many years ago by the early colonists. It seems that someone had told someone who had told someone else that here, a mere twenty feet beneath the surface, was a vein as wide as a house and as long as a fisherman's alibi, of pure—*pure,* mind you—gold.

Back in those days, to be a colonist meant to be a rugged individual. And to be a rugged

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individual meant to not give a damn one way or another. And to not give a damn one way or another meant to make one hell of a mess on the placid face of Mars.

There had not been any gold found, of course, and now, for the most part, the mining shacks so hastily thrown up were only fever scars of a sickness long gone and little remembered. A few of the houses were still occupied, like the one into which the Martian boy had just disappeared.

So his *mother* had taught him the William Tell Overture, had she? That tickling thought made me chuckle as I stood before the ramshackle building. And then, suddenly, I stopped chuckling and began to think, instead, of something quite astonishing:

How had it been possible for her to teach, and for him to whistle?

All Martians are as tone-deaf as a bucket of lead.

I went up three slab steps and rapped loudly on the weather-beaten door.

THE woman who faced me may have been as young as twenty-two, but she didn't look it. That shocked look, which comes with the first realization that youth has slipped quietly away downstream in the middle of the night, and left nothing but frightening rocks of middle age to show cold and gray in the hard light of dawn, was like the validation stamp of Time itself in her wide, wise eyes. And her voice wasn't young any more, either.

"Well? And what did I do now?"

"I beg your pardon?" I said. "You're Mobile Security, aren't you? Or is that badge you're wearing just something to cover a hole in your shirt?"

"Yes, I'm Security, but does it have to mean something?" I asked. "All I did was knock on your door."

"I heard it." Her lips were curled slightly at one corner.

I worked up a smile for her and let her see it for a few seconds before I answered: "As a matter of fact, I don't want to see *you* at all. I didn't know you lived here and I don't know who you are. I'm not even interested in who you are. It's the little boy who just went in here that I was interested in. The little Martian boy, I mean."

Her eyes spread as though somebody had put fingers on her lids at the outside corners and then cruelly jerked them apart.

"Come in," she almost gasped.

I followed her. When I leaned back against the plain door, it closed protestingly. I looked around. It wasn't much of a room, but then you couldn't ex-

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pect much of a room in a little ghost of a place like this. A few knickknacks of the locality stood about on two tables and a shelf, bits of rock with streak-veins of fused corundum; not bad if you like the appearance of squeezed blood.

There were two chairs and a large table intended to match the chairs, and a rough divan kind of thing made of discarded cratings which had probably been hauled here from the International Spaceport, ten miles to the West. In the back wall of the room was a doorway that led dimly to somewhere else in the house. Nowhere did I see the little boy. I looked once again at the woman.

"What about him?" she whispered.

Her eyes were still startled.

I smiled reassuringly. "Nothing, lady, nothing. I'm sorry I upset you. I was just being nosy is all, and that's the truth of it. You see, the little boy went by me a while ago and he was whistling. He whistles remarkably well. I asked him what the name of the tune was and he told me it was the 'Calm' from William Tell. He also told me his mother had taught him."

Her eyes hadn't budged from mine, hadn't flickered. They might have been bright, moist marbles glued above her cheeks.

She said one word only: "Well?"

"Nothing," I answered. "Except that Martians are supposed to be tone-deaf, aren't they? It's something lacking in their sense of hearing. So when I heard this little boy, and saw he was a Martian, and when he told me his *mother* had taught him—" I shrugged and laughed a little. "Like I said before, I guess I got just plain nosy."

She nodded. "We agree on that last part."

Perhaps it was her eyes. Or perhaps it was the tone of her voice. Or perhaps, and more simply, it was her attitude in general. But whatever it was, I suddenly felt that, nosy or not, I was being treated shabbily.

"I would like to speak to the Martian lady," I said.

"There isn't any Martian lady."

"There *has* to be, doesn't there?" I said it with little sharp prickers on the words.

But she did, too: "*Does there?*"

I gawked at her and she stared back. And the stare she gave me was hard and at the same time curiously defiant—as though she would dare me to go on with it. As though she figured I hadn't the guts.

For a moment, I just blinked stupidly at her, as I had blinked stupidly at the little boy when he told me his mother had

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taught him how to whistle. And then—after what seemed to me a very long while—I slowly tumbled to what she meant.

Her eyes were telling me that the little Martian boy wasn't a little Martian boy at all, that he was cross-breed, a little chap who had a Martian father and a human, Earthwoman mother.

It was a startling thought, for there just aren't any such mixed marriages. Or at least I had thought there weren't. Physically, spiritally, mentally, or by any other standard you can think of, compared to a human male the Martian isn't anything you'd want around the house.

I finally said: "So that is why he is able to whistle."

She didn't answer. Even before I spoke, her eyes had seen the correct guess which had probably flashed naked and astounded in my own eyes. And then she swallowed with a labored breath that went trembling down inside her.

"There isn't anything to be ashamed of," I said gently. "Back on Earth there's a lot of mixtures, you know. Some people even claim there's no such thing as a pure race. I don't know, but I guess we all started somewhere and intermarried plenty since."

She nodded. Somehow her eyes didn't look defiant any more.

"Where's his father?" I asked.

"H-he's dead."

"I'm sorry. Are you all right? I mean do you get along okay and everything, now that . . .?"

I stopped. I wanted to ask her if she was starving by slow degrees and needed help. Lord knows the careworn look about her didn't show it was luxurious living she was doing—at least not lately.

"Look," I said suddenly. "Would you like to go home to Earth? I could fix—"

But that was the wrong approach. Her eyes snapped and her shoulders stiffened angrily and the words that ripped out of her mouth were not coated with honey.

"Get the hell out of here, you fool!"

I blinked again. When the flame in her eyes suddenly seemed to grow even hotter, I turned on my heel and went to the door. I opened it, went out on the top slab step. I turned back to close the door—and looked straight into her eyes.

She was crying, but that didn't mean exactly what it looked like it might mean. Her right hand had the door edge gripped tightly and she was swinging it with all the strength she possessed. And while I still stared, the door slammed savagely into the casing with a shock that jarred the slab under my feet, and flying splinters from the rotten woodwork

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stung my flinching cheeks.

I shrugged and turned around and went down the steps. "And that is the way it goes," I muttered disgustedly to myself. Thinking to be helpful with the firewood problem, you give a woman a nice sharp axe and she immediately puts it to use—on you.

I looked up just in time to avoid running into a spread-legged man who was standing motionless directly in the middle of the sand-path in front of the door. His hands were on his hips and there was something in his eyes which might have been a leer.

"PULLED a howler in there, eh, mate?" he said. He chuckled hoarsely in his throat. "Not being exactly deaf, I heard the tail end of it." His chuckle was a lewd thing, a thing usually reserved—if it ever was reserved at all—for the mens' rooms of some of the lower class dives. And then he stopped chuckling and frowned instead and said complainingly:

"Regular little spitfire, ain't she? I ask you now, wouldn't you think a gal which had got herself in a little jam, so to speak, would be more reasonable—"

His words chopped short and he almost choked on the final unuttered syllable. His glance had dropped to my badge and the look on his face was one of startled surprise.

"I—" he said.

I cocked a frown of my own at him.

"Well, so long, mate," he grunted, and spun around and dug his toes in the sand and was away. I stood there staring at his rapidly disappearing form for a few moments and then looked back once more at the house. A tattered cotton curtain was just swinging to in the dirty, sand-blown window. That seemed to mean the woman had been watching. I sighed, shrugged again and went away myself.

When I got back to Security

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Headquarters, I went to the file and began to rifle through pictures. I didn't find the woman, but I did find the man.

He was a killer named Harry Smythe.

I took the picture into the Chief's office and laid it on his desk, waited for him to look down at it and study it for an instant, and then to look back up to me. Which he did.

"So?" he said.

"Wanted, isn't he?"

He nodded. "But a lot of good that'll do. He's holed up somewhere back on Earth."

"No," I said. "He's right here. I just saw him."

"*What?*" He nearly leaped out of his chair.

"I didn't know who he was at first," I said. "It wasn't until I looked in the files—"

He cut me off. His hand darted into his desk drawer and pulled out an Authority Card. He shoved the card at me. He growled: "Kill or capture, I'm not especially fussy which. Just *get* him!"

I nodded and took the card. As I left the office, I was thinking of something which struck me as somewhat more than odd.

I had idly listened to a little half-breed Martian boy whistling part of the William Tell Overture, and it had led me to a wanted killer named Harry Smythe.

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UNDERSTANDABLY, Mr. Smythe did not produce himself on a silver platter. I spent the remainder of the afternoon trying to get a lead on him and got nowhere. If he was hiding in any of the places I went to, then he was doing it with mirrors, for on Mars an Authority Card is the big stick than which there is no bigger. Not solely is it a warrant, it is a commandeer of help from anyone to whom it is presented; and wherever I showed it I got respect.

I got instant attention. I got even more: those wraithlike tremblings in the darker corners of saloons, those corners where light never seems quite to penetrate. You don't look into those. Not if you're anything more than a ghoul, you don't.

Not finding him wasn't especially alarming. What was alarming, though, was not finding the Earthwoman and her little half-breed Martian son when I went back to the tumbledown shack where they lived. It was empty. She had moved fast. She hadn't even left me a note saying good-by.

That night I went into the Great Northern desert to the Haremheb Reservation, where the Martians still try to act like Martians.

It was Festival night, and when I got there they were doing the dance to the two moons. At times like this you want to leave the Martians alone. With that thought in mind, I pinned my Authority Card to my lapel directly above my badge, and went through the gates.

The huge circle fire was burning and the dance was in progress. Briefly, this can be described as something like the ceremonial dances put on centuries ago by the ancient aborigines of North America. There was one important exception, however. Instead of a central fire, the Martians dig a huge circular trench and fill it with dried roots of the *belu* tree and set fire to it. Being pitch-like, the gnarled fragments burn for hours. Inside this ring sit the spectators, and in the exact center are the dancers. For music, they use the drums.

The dancers were both men and women and they were as naked as Martians can get, but their dance was a thing of grace and loveliness. For an instant—before anyone observed me—I stood motionless and watched the sinuously undulating movements, and I thought, as I have often thought before, that this is the one thing the Martians can still do beautifully. Which, in a sad sort of way, is a commentary on the way things have gone since the first rocket-blasting ship set down on these purple sands.

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I felt the knife dig my spine. Carefully I turned around and pointed my index finger to my badge and card. Bared teeth glittered at me in the flickering light, and then the knife disappeared as quickly as it had come.

"Wahanhk," I said. "The Chief. Take me to him."

The Martian turned, went away from the half-light of the circle. He led me some yards off to the north to a swooping-tent. Then he stopped, pointed.

"Wahanhk," he said.

I watched him slip away.

Wahanhk is an old Martian. I don't think any Martian before him has ever lived so long—and doubtless none after him will, either. His leathery, almost purple-black skin was rough and had a charred look about it, and up around the eyes were little plaits and folds that had the appearance of being done deliberately by a Martian sand-artist.

"Good evening," I said, and sat down before him and crossed my legs.

He nodded slowly. His old eyes went to my badge.

From there they went to the Authority Card.

"Power sign of the Earthmen," he muttered.

"Not necessarily," I said. "I'm not here for trouble. I know as well as you do that, before tonight is finished, more than half of your men and women will be drunk on illegal whiskey."

He didn't reply to that.

"And I don't give a damn about it," I added distinctly.

His eyes came deliberately up to mine and stopped there. He said nothing. He waited. Outside, the drums throbbed, slowly at first, then moderated in tempo. It was like the throbbing—or sobbing, if you prefer—of the old, old pumps whose shafts go so tirelessly down into the planet for such pitifully thin streams of water.

"I'm looking for an Earthwoman," I said. "This particular Earthwoman took a Martian for a husband."

"That is impossible," he grunted bitterly.

"I would have said so, too," I agreed. "Until this afternoon, that is."

His old, dried lips began to purse and wrinkle.

"I met her little son," I went on. "A little semi-human boy with Martian features. Or, if you want to turn it around and look at the other side, a little Martian boy who whistles."

His teeth went together with a snap.

I nodded and smiled. "You know who I'm talking about."

For a long long while he didn't answer. His eyes remained unblinking on mine and if, earlier

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in the day, I had thought the little boy's face was expressionless, then I didn't completely appreciate the meaning of that word. Wahanhk's face was more than expressionless; it was simply blank.

"They disappeared from the shack they were living in," I said. "They went in a hurry—a very great hurry."

That one he didn't answer, either.

"I would like to know where she is."

"Why?" His whisper was brittle.

"She's not in trouble," I told him quickly. "She's not wanted. Nor her child, either. It's just that I have to talk to her."

"Why?"

I pulled out the file photo of Harry Smythe and handed it across to him. His wrinkled hand took it, pinched it, held it up close to a lamp hanging from one of the ridge poles. His eyes squinted at it for a long moment before he handed it back.

"I have never seen this Earthman," he said.

"All right," I answered. "There wasn't anything that made me think you had. The point is that he knows the woman. It follows, naturally, that she might know him."

"This one is *wanted?*" His old, broken tones went up slightly on the last word.

I nodded. "For murder."

"Murder." He spat the word. "But not for the murder of a Martian, eh? Martians are not that important any more." His old eyes hated me with an intensity I didn't relish.

"You said that, old man, not I."

A little time went by. The drums began to beat faster. They were rolling out a lively tempo now, a tempo you could put music to.

He said at last: "I do not know where the woman is. Nor the child."

He looked me straight in the eyes when he said it—and almost before the words were out of his mouth, they were whipped in again on a drawn-back, great, sucking breath. For, somewhere outside, somewhere near that dancing circle, in perfect time with the lively beat of the drums, somebody was whistling.

It was a clear, clean sound, a merry, bright, happy sound, as sharp and as precise as the thrust of a razor through a piece of soft yellow cheese.

"In your teeth, Wahanhk! Right in your teeth!"

He only looked at me for another dull instant and then his eyes slowly closed and his hands folded together in his lap. Being caught in a lie only bores a Martian.

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I got up and went out of the tent.

THE woman never heard me approach. Her eyes were toward the flaming circle and the dancers within, and, too, I suppose, to her small son who was somewhere in that circle with them, whistling. She leaned against the bole of a *belu* tree with her arms down and slightly curled backward around it.

"That's considered bad luck," I said.

Her head jerked around with my words, reflected flames from the circle fire still flickering in her eyes.

"That's a *belu* tree," I said. "Embracing it like that is like looking for a ladder to walk under. Or didn't you know?"

"Would it make any difference?" She spoke softly, but the words came to me above the drums and the shouts of the dancers. "How much bad luck can you have in one lifetime, anyway?"

I ignored that. "Why did you pull out of that shack? I told you you had nothing to fear from me."

She didn't answer.

"I'm looking for the man you saw me talking with this morning," I went on. "Lady, he's wanted. And this thing on my lapel is an Authority Card. Assuming you know what it means, I'm asking you where he is."

"What man?" Her words were flat.

"His name is Harry Smythe."

If that meant anything to her, I couldn't tell. In the flickering light from the fires, subtle changes in expression weren't easily detected.

"Why should I care about an Earthman? My husband was a Martian. And he's dead, see? Dead. Just a Martian. Not fit for anything, like all Martians. Just a bum who fell in love with an Earthwoman and had the guts to marry her. Do you understand? So somebody murdered him for it. Ain't that pretty? Ain't that something to make you throw back your head and be proud about? Well, ain't it? And let me tell you, Mister, whoever it was, I'll get him. *I'll get him!*"

I could see her face now, all right. It was a twisted, tortured thing that writhed at me in its agony. It was small yellow teeth that bared at me in viciousness. It was eyes that brimmed with boiling, bubbling hate like a ladle of molten steel splashing down on bare, white flesh. Or, simply, it was the face of a woman who wanted to kill the killer of her man.

And then, suddenly, it wasn't. Even though the noise of the dance and the dancers was loud

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enough to command the attention and the senses, I could still hear her quiet sobbing, and I could see the heaving of the small, thin shoulders.

And I knew then the reason for old Wahanhk's bitterness when he had said to me, "But not for the murder of a Martian, eh? Martians are not that important any more."

What I said then probably sounded as weak as it really was: "I'm sorry, kid. But look, just staking out in that old shack of yours and trying to pry information out of the type of men who drifted your way—well, I mean there wasn't much sense in that, now was there?"

I put an arm around her shoulders. "He must have been a pretty nice guy," I said. "I don't think you'd have married him if he wasn't."

I stopped. Even in my own ears, my words sounded comfortless. I looked up, over at the flaming circle and at the sweat-laved dancers within it. The sound of the drums was a wild cacaphonous tattoo now, a rattle of speed and savagery combined; and those who moved to its frenetic jabberings were not dancers any more, but only frenzied, jerking figurines on the strings of a puppeteer gone mad.

I looked down again at the woman. "Your little boy and his butterfly net," I said softly. "In a season when no butterflies can be found. What was that for? Was he part of the plan, too, and the net just the alibi that gave him a passport to wander where he chose? So that he could listen, pick up a little information here, a little there?"

She didn't answer. She didn't have to answer. My guesses can be as good as anybody's.

After a long while she looked up into my eyes. "His name was Tahily," she said. "He had the secret. He knew where the gold vein was. And soon, in a couple of years maybe, when all the prospectors were gone and he knew it would be safe, he was going to stake a claim and go after it. For us. For the three of us."

I sighed. There wasn't, isn't, never will be any gold on this planet. But who in the name of God could have the heart to ruin a dream like that?

NEXT day I followed the little boy. He left the reservation in a cheery frame of mind, his whistle sounding loud and clear on the thin morning air. He didn't go in the direction of town, but the other way—toward the ruins of the ancient Temple City of the Moons. I watched his chubby arm and the swinging of the big butterfly net on the end

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of that arm. Then I followed along in his sandy tracks.

It was desert country, of course. There wasn't any chance of tailing him without his knowledge and I knew it. I also knew that before long he'd know it, too. And he did—but he didn't let me know he did until we came to the rag-cliffs, those filigree walls of stone that hide the entrance to the valley of the two moons.

Once there, he paused and placed his butterfly net on a rock ledge and then calmly sat down and took off his shoes to dump the sand while he waited for me.

"Well," I said. "Good morning."

He looked up at me. He nodded politely. Then he put on his shoes again and got to his feet.

"You've been following me," he said, and his brown eyes stared accusingly into mine.

"I have?"

"That isn't an honorable thing to do," he said very gravely. "A gentleman doesn't do that to another gentleman."

I didn't smile. "And what would you have me do about it?"

"Stop following me, of course, sir."

"Very well," I said. "I won't follow you any more. Will that be satisfactory?"

"Quite, sir."

Without another word, he picked up his butterfly net and disappeared along a path that led through a rock crevice. Only then did I allow myself to grin. It was a sad and pitying and affectionate kind of grin.

I sat down and did with my shoes as he had done. There wasn't any hurry; I knew where he was going. There could only be one place, of course—the city of Deimos and Phobos. Other than that he had no choice. And I thought I knew the reason for his going.

Several times in the past, there have been men who, bitten with the fever of an idea that somewhere on this red planet there must be gold, have done prospecting among the ruins of the old temples. He had probably heard that there were men there now, and he was carrying out with the thoroughness of his precise little mind the job he had set himself of finding the killer of his daddy.

I took a short-cut over the rag-cliffs and went down a winding, sand-worn path. The temple stones stood out barren and dry-looking, like breast bones from the desiccated carcass of an animal. For a moment I stopped and stared down at the ruins. I didn't see the boy. He was somewhere down there, though, still swinging his butterfly net and, probably, still whistling.

I started up once more.

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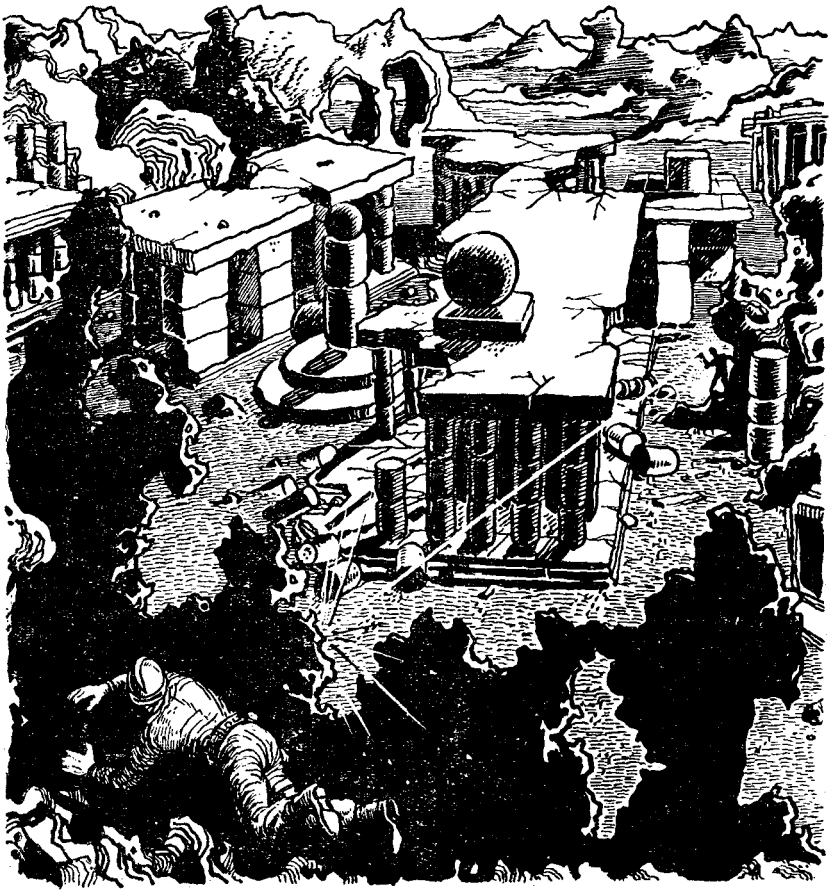
And then I heard it—a shrill blast of sound in an octave of urgency; a whistle, sure, but a warning one.

I stopped in my tracks from the shock of it. Yes, I knew from whom it had come, all right. But I didn't know why.

And then the whistle broke off short. One instant it was in the air, shrieking with a message. The next it was gone. But it left tailings, like the echo of a death cry slowly floating back over the dead body of the creature that uttered it.

I dropped behind a fragment of the rag-cliff. A shot barked out angrily. Splinters of the rock crazed the morning air.



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The little boy screamed. Just once.

I waited. There was a long silence after that. Then, finally, I took off my hat and threw it out into the valley. The gun roared once more. This time I placed it a little to the left below me. I took careful sighting on the hand that held that gun—and I didn't miss it.

It was Harry Smythe, of course, When I reached him, he had the injured hand tucked tightly in the pit of his other arm. There was a grim look in his eyes and he nodded as I approached him.

"Good shooting, mate. Should be a promotion in it for you. Shooting like that, I mean."

"That's nice to think about," I said. "Where's the boy? I owe him a little something. If he hadn't whistled a warning, you could have picked me off neat."

"I would." He nodded calmly.

"Where is he?"

"Behind the rock there. In that little alcove, sort of." He indicated with his chin.

I started forward. I watched him, but I went toward the rock.

"Just a minute, mate."

I stopped. I didn't lower my gun.

"That bloody wench we spoke about yesterday. You know, out in front of that shack? Well, just a thought, of course, but if you pull me in and if I get *it,* what'll become of her, do you suppose? Mean to say, I couldn't support her when I was dead, could I?"

"Support her?" Surprise jumped into my voice.

"What I said. She's my wife, you know. Back on Earth, I mean. I skipped out on her a few years back, but yesterday I was on my way to looking her up when you—"

"She didn't recognize the name Harry Smythe," I said coldly. "I'm afraid you'll have to think a little faster."

"Of course she didn't! How could she? That ain't my name. What made you think it was?"

Bright beads of sweat sparkled on his forehead, and his lips had that frantic looseness of lips not entirely under control.

"You left her," I grunted. "But you followed her across space anyway. Just to tell her you were sorry and you wanted to come back. Is that it?"

"Well—" His eyes were calculating. "Not the God's honest, mate, no. I didn't know she was here. Not at first. But there was this Spider, see? This Martian. His name was Tahily and he used to hang around the saloons and he talked a lot, see? Then's when I knew . . ."

"So it was you who killed him," I said. "One murder wasn't enough back on Earth; you had to pile them up on the planets."

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I could feel something begin to churn inside of me.

"Wait! Sure, I knocked off the Martian. But a fair fight, see? That Spider jumped my claim. A fair fight it was, and anybody'd done the same. But even without that, he had it coming anyway, wouldn't you say? Bigamist and all that, you know? I mean marrying a woman already married."

His lips were beginning to slobber. I watched them with revulsion in my stomach.

"Wouldn't you say, mate? Just a lousy, stinking Martian, I mean!"

I swallowed. I turned away and went around the rock and looked down. One look was enough. Blood was running down the cheek of the prone little Martian boy, and it was coming from his mouth. Then I turned back to the shaking man.

"Like I say, mate! I mean, what would you've done in my place? Whistling always did drive me crazy. I can't stand it. A phobia, you know. People *suffer* from phobias!"

"What did you do?" I took three steps toward him. I felt my lips straining back from my teeth.

"Wait now, mate! Like I say, it's a phobia. I can't stand whistling. It makes me suffer—"

"So you cut out his tongue?"

I didn't wait for his answer. I couldn't wait. While I was still calm, I raised my gun on his trembling figure. I didn't put the gun up again until his body stopped twitching and his fingers stopped clawing in the sands.

FROM the desk to the outside door, the hospital corridor runs just a few feet. But I'd have known her at any distance. I sighed, got to my feet and met her halfway.

She stopped before me and stared up into my eyes. She must have run all the way when she got my message, for although she was standing as rigid as a pole in concrete, something of her exhaustion showed in her eyes.

"Tell me," she said in a panting whisper.

"Your boy is going to be okay." I put my arm around her. "Everything's under control. The doctors say he's going to live and pull through and . . ."

I stopped. I wondered what words I was going to use when no words that I had ever heard in my life would be the right ones.

"Tell me." She pulled from my grasp and tilted her head so that she could look up into my eyes and read them like a printed page. "*Tell me!*"

"He cut out the boy's—he said he couldn't stand whistling. It was a phobia, he claimed. Eight bullets cured his phobia, if any."

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"He cut out what?"

"Your son's tongue."

I put my arm around her again, but it wasn't necessary. She didn't cry out, she didn't slump. Her head did go down and her eyes did blink once or twice, but that was all.

"He was the only little boy on Mars who could whistle," she said.

All of the emotion within her was somehow squeezed into those few words.

I COULDN'T get it out of my mind for a long while. I used to lie in bed and think of it somewhat like this:

There was this man, with his feet planted in the purple sands, and he looked up into the night sky when the moon called Deimos was in perigee, and he studied it. And he said to himself, "Well, I shall write a book and I shall say in this book that the moon of Mars is thus and so. And I will be accurately describing it, for in truth the moon *is* thus and so."

And on the other side of the planet there was another man. And he, too, looked up into the night sky. And he began to study the moon called *Phobos*. And he, too, decided to write a book. And he knew he could accurately describe the moon of Mars, for his own eyes had told him it looked like thus and so. And his own eyes did not lie.

I thought of it in a manner somewhat like that. I could tell the woman that Harry Smythe, her first husband, was the man who had killed Tahily, the Martian she loved. I could tell her Smythe had killed him in a fair fight because the Martian had tried to jump a claim. And her heart would be set to rest, for she would know that the whole thing was erased and done with, at last.

Or, on the other hand, I could do what I eventually did do. I could tell her absolutely nothing, in the knowledge that that way she would at least have the strength of hate with which to sustain herself through the years of her life. The strength of her hate against this man, whoever he might be, plus the chill joy of anticipating the day—maybe not tomorrow, but some day—when, like the dream of finding gold on Mars, she'd finally track him down and kill him.

I couldn't leave her without a reason for living. Her man was dead and her son would never whistle again. She had to have something to live for, didn't she?

—DEAN EVANS

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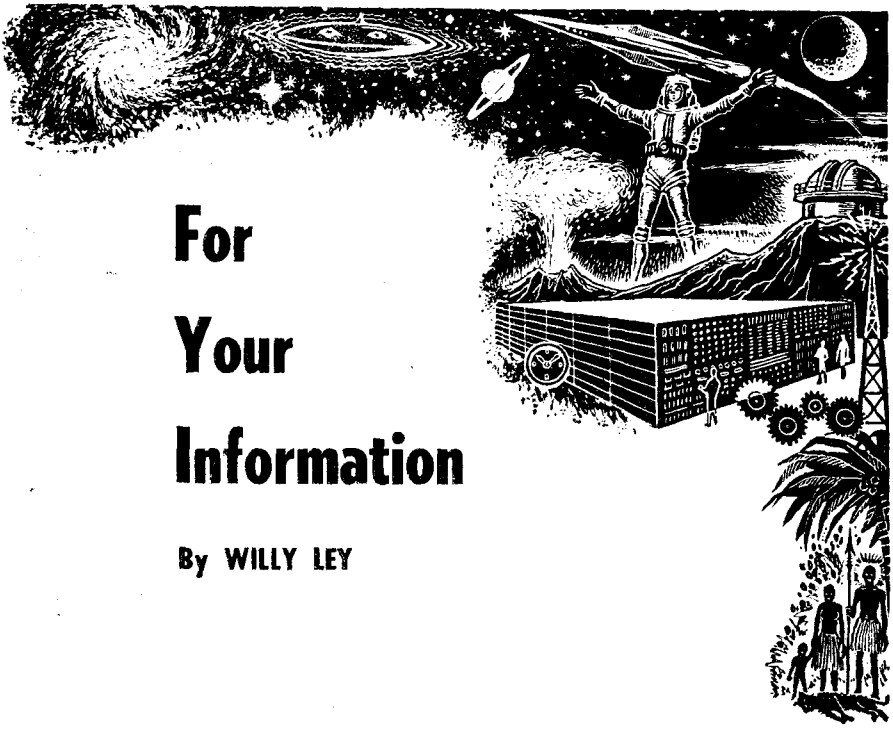

For Your Information

By WILLY LEY

SPACE TRAVEL BY 1960?

THIS issue's cover is something of "instant recognition" to science fiction readers—it shows a spaceship takeoff. Science fiction readers would have recognized such a picture even twenty years ago. Now, however, the same picture might be on the cover of *any* magazine and the majority of the readers of that magazine would know what it is supposed

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to show. That is vast progress.

Fortunately, that is not the only kind of progress that has been made during the last two decades. In 1932, one could only prophesy that rocket research would eventually be taken up on a large scale, that it would be a long and difficult task, but that the goal of the manned spaceship would be at the end of the road. Now large-scale rocket research is going on, formerly "incredible feats" have been accomplished, and the goal of the spaceship appears so near that it will need only one concerted and serious effort to reach it.

After all, even though nobody has yet built a manned spaceship, space has already been pierced. During lectures I often draw a segment of a circle on the blackboard, representing the surface of the Earth. Then I draw a similar line at a scale distance of 60 miles above the first, which is the altitude where the air has become so attenuated that no control surface would work any more, even at speeds of several miles per second. That altitude has been surpassed by dozens of V-2, *Aerobee* and *Viking* rockets. Then I draw another line at a scale distance of 110 miles, where the missile as a whole no longer encounters detectable air resistance and where "space begins." That height has been exceeded by several V-2 rockets, at least one *Viking* and, of course, the *WAC-Corporal* which formed the "upper stage" of a V-2 in 1949 and soared to a peak altitude of 250 miles.

Finally, I add one line quite near the ground. The scale distance is 60,000 feet, which is the altitude where air pressure has fallen so low that the blood of a pilot exposed to it would begin to boil—as you know, the lower the air pressure, the lower the boiling point of a given liquid. Anything which is to be piloted above 60,000 feet, therefore, has to have what might be called "full spaceship equipment" as far as pilot comfort is concerned. And rocket-propelled aircraft has been piloted to beyond 60,000 feet.

It is easy to see that the complex of problems represented by the concept of the manned spaceship is no longer completely unknown territory. Deep inroads have been made into it from various directions for different purposes. High altitude research has furnished much basic information. Missile design has produced what can be called "spaceship instrumentation." High-altitude fighter design has attached and obviously solved the problem of the spaceship cabin.

All right, then, provided that the necessary concerted effort is

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made, and the money is provided, when will we get the first manned spaceship? If the money is provided soon, I think that it is a safe answer to say: *in about ten years.*

OF course, the first spaceship won't go to Mars or even to the Moon. In fact, we probably won't be able to take off *directly* for the Moon or for Mars for many years to come. As far as the clearly foreseeable future is concerned, such trips will have to start from a space station which circles the Earth. The voyage of the first spaceship, as I have repeatedly said, will go literally nowhere. It will be a vertical takeoff from base, followed by a tilt in an easterly direction so that the ship will travel along an ellipse around the Earth. The captain will stay "up" until all the service tests have been completed, the observing program carried out, or until everybody aboard is thoroughly bored. Then he'll land again, trying to make it as close to base as he can.

For such a trip, the spaceship has to reach a velocity of about 4.5 miles (7 kilometers) per second. If we want to do that with present-day fuels, the ship would have to have an overall mass-ratio of 33:1, which means that its takeoff mass would have to be 33 times as high as its remaining mass, the mass of the ship proper, and its payload.

Such a mass-ratio can only be built as a three-stage rocket, so that the two lower stages can drop off when their fuel supply has been exhausted. That way, they pass their energy on to the final stage, but not their dead weight.

The mass-ratio of 33:1 was calculated on the basis of an exhaust velocity of 2 kilometers per second for rocket fuels. The fuels we have now in reality can do somewhat better than that and further fuel inprovement would, of course, be one of the phases of the effort. It is probably justified to expect an exhaust velocity of 3 kilometers per second within a few years. In that case, the mass-ratio for the same trip would have to be 10.25 : 1 and a spaceship with a takeoff mass of "only" ten times the remaining mass can easily be built as a two-step ship.

You can, if you wish, dream about an exhaust velocity of 5 kilometers or about 3 miles per second, in which case your mass-ratio would drop to 4:1. That is about the mass-ratio of the *Viking* rocket and the result would be a single ship, no longer broken up into steps, even though a booster might be desirable for reasons of stability during takeoff.

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Well, why not dream about this? Don't we have atomic energy which should make an exhaust velocity of even 5 kilometers per second seem slow? Unfortunately, we don't, meaning that we do not yet know how to handle it properly for this purpose. We know how to make an atomic explosion. We know how to make artificial radioactivity. We know how to boil water in an atomic pile with the aid of exploding uranium nuclei. But we don't know how to utilize atomic energy for rocket propulsion. That is still a secret of Nature and it is not too probable that it already is a Secret (with a capital "s") of the Atomic Energy Commission.

The heat-an-inert-liquid-with-an-atomic-pile method is not too promising. The idea is this: In a chemical fuel, the combustion of the fuel provides both heat and combustion gases which are expelled by the rocket as reaction mass. If we could use an atomic pile, almost anything liquid would serve as reaction mass and the pile would provide the heat. That sounds lovely except that the heat from the pile has to be transferred to the reaction mass and that takes time. Chemical combustion heats much faster, unless you can run the pile at an enormously high temperature.

Doctors Malina and Summerfield once published calculations showing just how hot the pile would have to be run. If we wanted an exhaust velocity of 7 kilometers per second (which would bring the mass-ratio of our ship down to a little less than 3:1) the chamber temperature, using hydrogen as reaction mass, would have to be 5000 degrees F. and the heat required would be almost 21,000 BTU per pound!

While a rocket engineer can safely promise a three-stage spaceship working on ordinary chemical fuels, the atomic engineer could not (and would not) promise an atomic pile of such a performance.

All of which does not mean that there won't be a time when we can build atomic powered spaceships. It just means that a new discovery in the field of atomic engineering has to come first.

But the liquid-fuel rocket engineer does not need new discoveries to build a spaceship. He just needs some time and a lot of money—say, several billion dollars and probably no more than ten years.

Will the funds be appropriated and the project be begun? I think so. It's the next logical step, and logical steps have a way of forcing men to take them.

But we'll have to start right

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away if we want to achieve space flight by 1960.

MORE ON C-14

PROF. Libby's C-14 method for dating the past has scored another triumph: we now know the age of Stonehenge. Stonehenge, situated some nine miles from Salisbury, England, on a large plain, has always excited the imagination of those who had seen it. Geoffroy of Monmouth, in 1130, took it to be a Roman monument built with the aid of Merlin—strangely enough, none of the Roman writers mentions it—and John Webb (1625) thought that it had been a Roman temple. John Aubrey (1655) took it to be a Druid temple instead and William Stukely (1723) "knew" that it had been built by Egyptian druids who had left their homeland in 460 B.C. to visit their British friends.

If you add the explanations of amateurs, astrologers and occultists, you get a nice list of possible builders: They were either men of the Late Stone Age, or men of the Early Bronze Age, or men of the Late Bronze Age. Or else visiting Atlanteans, Lemurians or Egyptians. Or visitors from space who wanted to impress the natives and also leave a landmark behind.

The absence of any literary mention prior to 1130 did make it a tough case, for Stonehenge was evidently much older and must have been conspicuous for as long as it existed. The only date which made any sense at all was still based on at least two assumptions. In 1901, Sir Norman Lockyer assumed that whoever had built Stonehenge had worshiped the Sun and that the monument was oriented in such a manner that the midsummer Sun would rise over the central sacrificial stone. That gave 1680 B.C. as the probable building date. Of course, one could reject the assumption that the builders were Sun-worshipers and thereby reject the dating, too.

Stonehenge naturally cannot be dated directly by the carbon-14 method, since this works only on material of organic origin. Recently, however, a so-far untouched sacrificial pit was uncovered and the charcoal it contained could be dated. The result was 1848 B.C. with a margin of error of 275 years either way. It seems that Sir Norman Lockyer's ideas were correct.

But we still don't know who built it.

THE PLANT THAT WASN'T

IN case you like a slightly incredible story, consider the case of the coughing plant. When

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people cough, the purpose is to remove something irritating from the throat; dust is the simplest case. One day, more than half a century ago, a few people were sitting together in Munich and one who happened to have a cold coughed frequently. The conversation veered to the subject of coughing, its mechanism and its purpose and one suggested that it would be useful if the pores of the skin could cough. "Yes," another chimed in, "that would be especially useful for plants; they don't like to have their pores choked by dust, either." Whereupon one member of the group grew thoughtful and said: "Supposing there were a coughing plant, wonder what its botanical name would be." "Easy," said somebody else. "Cough in Latin is *tussis*. Obviously, the name would be *Tussissia* something or other."

The offshoot of the evening was a little article discussing the discovery of *Tussissia australis,* which was published by the Munich paper *Münchner Neueste Nachrichten.* It was not a hoax because the date of the paper was the first of April, 1900, and anybody on the continent knows better than to believe anything published in an April 1st issue. Printed April-fooling on a large scale is an old continental custom—but sometimes somebody neglects to look at the dateline.

A few weeks later, a well-reputed German daily printed a little essay on the marvelous tropical plant *Tussissia,* related to the red-flowered string bean of northern Europe.

Another two weeks later, said essay could be read in fine French in the *Journal de la Santé* in Paris. The *Journal de la Santé* reached Sydney in Australia as fast as the mails of the year 1900 would carry it. Three days after arrival, the story could be read, in English, in the *Sydney Mail.*

I don't know just where the coughing plant "grew" for the following years, but in 1919 it was back in Germany, appearing almost simultaneously in the *Rhenish - Westphalian Gazette* and in the *Kölnische Zeitung.* The editors of both apparently believed that it had been a discovery made during the war years and that the news had not penetrated through the front lines.

Five years after that, the coughing plant made one more appearance in an important daily paper published in Hamburg and was taken from there by several Scandinavian publications.

Science fiction editors, beware! If among the "odd little facts of science" which come to your desk is something about a coughing plant — no matter under what Latin name—it is

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merely an old joke that miscarried.

TWINKLE TWINKLE NEEDLEBEAM

HERE'S a minor item that may come in handy when your children start asking questions about little stars that twinkle. Everybody knows that those distant suns which we, by force of habit, still call "fixed stars" have a twinkling light. A good many people also know that the planets do not. I have often taken advantage of that fact when it came to pointing out planets at night, saying something like: "See that bright star over that tree top? Now look a little to the right from there and you'll see two stars which are fairly close together. The one that does not twinkle is Saturn."

When somebody recently asked, "Why doesn't it twinkle, too?" I had to draw a few diagrams in my mind in order to explain. The twinkling is caused mostly in the lowermost five miles of the atmosphere. It is due to minor disturbances, tiny volumes of greater or lesser density and temperature. Because they are tiny, the presence or absence of twinkle turns out to be a question of beam width.

Let's say that the light beam which enters the eye is two millimeters wide. That is the apex of a cone of light, the base of which is the diameter of the star. Even though the base of that cone may have a diameter of 1½ million miles for a fair-sized star, it can easily be 58,800,000 million miles away. In fact, it is usually much more because the distance just mentioned is merely ten light-years.

Jupiter's diameter is only 86,700 miles, but when the planet looks particularly bright, it is no more than some 400 million miles away. The result of this relationship is that, at a height of about three miles, the light beam from Jupiter has a diameter of several inches. The irregularities of the atmosphere affect only a fraction of that beam at a time.

But the light beam from a distant sun is a "needlebeam." Even at ten miles, it is still just two millimeters. Hence that beam is affected for its full width and seems to twinkle.

—WILLY LEY

ANY QUESTIONS?

Why do a few glaciers, like the Juneau glacier, increase in size although climatologists seem to be in agreement that Earth's weather is getting warmer. Is it?

Joe Gibson
24 Kensington Avenue
Jersey City 4, N. J.

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I believe that the agreement on a gradual and slight but persistent increase in the "annual mean temperature" for the whole planet is unanimous. There is little doubt that the fringes of the antarctic ice are slowly crumbling. Icebergs do not seem to drift as far in the direction of the equator as reported from the past, and they also seem to be smaller in size. It is definitely established that virtually all glaciers are slowly receding.

It is not yet known just what is the cause of all this, but there is a kind of general answer: We are still pulling out of the last Ice Age. We know from geological evidence that the Earth was almost always considerably warmer than it is now. There were only two comparatively short periods when it was colder than it is now—the glaciation of the Permian period and the recent one.

Of the recent one, we know that it had at least three "interglacial" periods (the Permian glaciation probably had similar interruptions, but that was too long ago to establish detail), each of which was longer than the period of glaciation. Since the last glaciation missed by just a few thousand years falling into earliest historical times, we are evidently still in the process of pulling out of it.

Whether we are in another "interglacial period" or actually at the end of a cold climate period is something we could answer only if we were certain of the underlying reasons for such cold spells. But in spite of more than a dozen hypotheses, published in more than ten dozen weighty volumes, we simply are not yet sure what caused the Ice Age.

That a single glacier like Juneau quoted by my correspondent may grow, while the others dwindle, is interesting but not inexplicable. Because more ice thaws, and more water evaporates, a specific glacier elsewhere might get more "food" than it would otherwise.

If you send a rocket up into a 24-hour orbit, would you need any lateral motion? I mean the rocket has the motion it had on the surface and travels around its orbit once every 24 hours, anyway.

Robert McArthur
3470 23rd Street SE
Washington D. C.

Instead of just saying yes or no, I'll let you figure it out for yourself.

A rocket standing at a point at the equator is, in round figures, 3950 miles from the center of the Earth. It has a lateral

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motion which we'll call "A" and which carries it once every 24 hours around the center of the Earth. The circle it describes has a length of 7900 miles (diameter of the Earth) times *pi*.

A rocket in the 24-hour orbit is 22,300 miles above sea level or 22,300 + 3950 = 26,250 miles from the center of the Earth. The diameter of its orbit is, consequently, 52,500 miles. The length of that orbit is 52,500 times *pi* miles. This distance must be covered every 24 hours.

Is the surface velocity "A" enough for that?

In a forthcoming issue, will you please discuss the force of gravity a little? Many science fiction stories seem to take it for granted that some way of overcoming it will be found.

Harold P. Pond
25 Ship Street
Brighton, England

The answer to the second sentence is simple—the authors of these stories either indulged in wishful thinking or else they needed a device for making their plotting easier.

As for the first sentence, I am sorry to report that there is no answer. Or at least not yet.

All we know about gravity is that absolutely nothing can be done to or about it. It does obey the inverse square law, but that is the sum total of our knowledge. And that doesn't mean anything, for the inverse square law (the intensity is one-fourth at twice the distance, one-ninth at three times the distance, etc.) is merely the geometrical fact that the area of a sphere is proportional to the square of its radius. Hence the inverse square law also applies to light and heat and other phenomena.

Since there is not much "answer" in this case, I feel like adding a little story which is quite significant in several respects. Around the year 1895, a French newspaper carried a long article with a title like "Krupp's Secret Revealed." Friedrich Krupp in Essen, already famous as a gun manufacturer, had at about that time astonished professional circles by the size and weight of castings and forgings produced for a number of purposes. The article in that French paper "told for the first time" just how Krupp's engineers could cope with pieces weighing from twenty tons up.

The secret was a real secret —somewhere in Krupp's factory there was a gravity-free assembly hall!

The writer of the article

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could not tell how that hall was made to be gravity-free, but he had spoken to an eyewitness who had described to him how a 12-ton gun barrel was lifted into place on its undercarriage hanging from a loop of bailing wire; and how a casting of the stern of a ship, comprising two propeller housings and the seating for the rudder shaft, had been manipulated by a single workman with a rope. The conclusion was, of course, that France had to learn Krupp's secret in order to compete with Germany.

Naturally, this article was picked up by other papers and magazines, both French and German. Several Germans felt that their positions were important enough so that they should be invited to see the gravity-free assembly hall. When Krupp's replied that there was no such thing, they were annoyed and did not believe it: "Of course, I realize the need for military secrecy, but since I am a personal advisor to His Grace I strongly feel, etc., etc."

Krupp's knew it wasn't so, but, mostly in self-defense, they started tracking the origin of the story.

It turned out to be absurdly simple.

One night, at a party, Krupp's feats in casting and forging enormous pieces had been discussed at great length and one of the men present, who happened to be an employee of Krupp's, had been questioned and questioned, mostly about things he did not know himself. Finally, to end the interminable discussion, he'd revealed the "secret" of the gravity-free assembly hall.

Unfortunately, it was merely a tall tale, but it seems to have had at least one fine literary result—H. G. Wells's *The First Men in the Moon* was probably inspired by it. In that story, if you remember, he used a gravity-neutralizing substance for interplanetary flight. He was just the first of many to do so.

But truth often follows science fiction, so we may yet find a way to overcome gravity. It might not look like a good betting proposition, but neither were many achievements of the past few decades.

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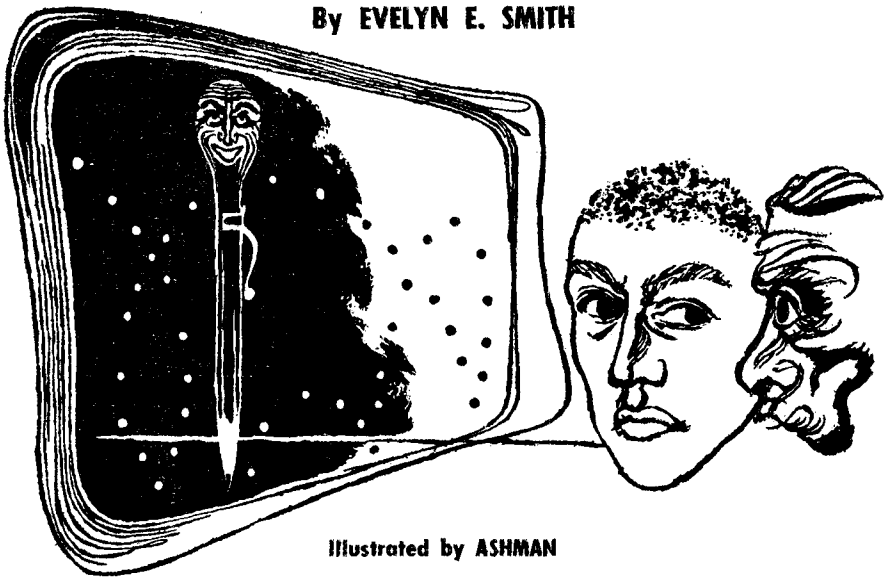
Tea Tray in the Sky

Visiting a society is tougher than being born into it. A 40 credit tour is no substitute!

By EVELYN E. SMITH



Illustrated by ASHMAN

THE picture changed on the illuminated panel that filled the forward end of the shelf on which Michael lay. A haggard blonde woman sprawled apathetically in a chair.

"Rundown, nervous, hypertensive?" inquired a mellifluous voice. "In need of mental therapy? Buy Grugis juice; it's not expensive. And they swear by it on Meropé."

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A disembodied pair of hands administered a spoonful of Grugis juice to the woman, whereupon her hair turned bright yellow, makeup bloomed on her face, her clothes grew briefer, and she burst into a fast Callistan clog.

"I see from your hair that you have been a member of one of the Brotherhoods," the passenger lying next to Michael on the shelf remarked inquisitively. He was a middle-aged man, his dust-brown hair thinning on top, his small blue eyes glittering preternaturally from the lenses fitted over his eyeballs.

Michael rubbed his fingers ruefully over the blond stubble on his scalp and wished he had waited until his tonsure were fully grown before he had ventured out into the world. But he had been so impatient to leave the Lodge, so impatient to exchange the flowing robes of the Brotherhood for the close-fitting breeches and tunic of the outer world that had seemed so glamorous and now proved so itchy.

"Yes," he replied courteously, for he knew the first rule of universal behavior, "I have been a Brother."

"Now why would a good-looking young fellow like you want to join a Brotherhood?" his shelf companion wanted to know. "Trouble over a female?"

Michael shook his head, smiling. "No, I have been a member of the Angeleno Brotherhood since I was an infant. My father brought me when he entered."

The other man clucked sympathetically. "No doubt he was grieved over the death of your mother."

Michael closed his eyes to shut out the sight of a baby protruding its fat face at him three-dimensionally, but he could not shut out its lisping voice: "Does your child refuse its food, grow wizened like a monkey? It will grow plump with oh-so-good Mealy Mush from Nunki."

"No, sir," Michael replied. "Father said that was one of the few blessings that brightened an otherwise benighted life."

Horror contorted his fellow traveller's plump features. "Be careful, young man!" he warned. "Lucky for you that you are talking to someone as broad-minded as I, but others aren't. You might be reported for violating a tabu. An Earth tabu, moreover."

"An Earth tabu?"

"Certainly. Motherhood is sacred here on Earth and so, of course, in the entire United Universe. You should have known that."

MICHAEL blushed. He should indeed. For a year prior to his leaving the Lodge, he had

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carefully studied the customs and tabus of the Universe so that he should be able to enter the new life he planned for himself, with confidence and ease. Under the system of universal kinship, all the customs and all the tabus of all the planets were the law on all the other planets. For the Wise Ones had decided many years before that wars arose from not understanding one's fellows, not sympathizing with them. If every nation, every planet, every solar system had the same laws, customs, and habits, they reasoned, there would be no differences, and hence no wars.

Future events had proved them to be correct. For five hundred years there had been no war in the United Universe, and there was peace and plenty for all. Only one crime was recognized throughout the solar systems—injuring a fellow-creature by word or deed (and the telepaths of Aldebaran were still trying to add *thought* to the statute).

Why, then, Michael had questioned the Father Superior, was there any reason for the Lodge's existence, any reason for a group of humans to retire from the world and live in the simple ways of their primitive forefathers? When there had been war, injustice, tyranny, there had, perhaps, been an understandable emotional reason for fleeing the world. But now why refuse to face a desirable reality? Why turn one's face upon the present and deliberately go back to the life of the past—the high collars, vests and trousers, the inefficient coal furnaces, the rude gasoline tractors of medieval days?

The Father Superior had smiled. "You are not yet a fully fledged Brother, Michael. You cannot enter your novitiate until you've achieved your majority, and you won't be thirty for another five years. Why don't you spend some time outside and see how you like it?"

Michael had agreed, but before leaving he had spent months studying the ways of the United Universe. He had skimmed over Earth, because he had been so sure he'd know its ways instinctively. Remembering his preparations, he was astonished by his smug self-confidence.

A large scarlet pencil jumped merrily across the advideo screen. The face on the eraser opened its mouth and sang: "Our pencils are finest from point up to rubber, for the lead is from Yed, while the wood comes from Dschubba."

"Is there any way of turning that thing off?" Michael wanted to know.

The other man smiled. "If there were, my boy, do you think

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anybody would watch it? Furthermore, turning it off would violate the spirit of free enterprise. We wouldn't want that, would we?"

"Oh, no!" Michael agreed hastily. "Certainly not."

"And it might hurt the advertiser's feelings, cause him ego injury."

"How could I ever have had such a ridiculous idea?" Michael murmured, abashed.

"Allow me to introduce myself," said his companion. "My name is Pierce B. Carpenter. Aphrodisiacs are my line. Here's my card." He handed Michael a transparent tab with the photograph of Mr. Carpenter suspended inside, together with his registration number, his name, his address, and the Universal seal of approval. Clearly he was a character of the utmost respectability.

"My name's Michael Frey," the young man responded, smiling awkwardly. "I'm afraid I don't have any cards."

"Well, you wouldn't have had any use for them where you were. Now, look here, son," Carpenter went on in a lowered voice, "I know you've just come from the Lodge and the mistakes you'll make will be through ignorance rather than deliberate malice. But the police wouldn't understand. You know what the sacred writings say: 'Ignorance of The Law is no excuse.' I'd be glad to give you any little tips I can. For instance, your hands . . ."

Michael spread his hands out in front of him. They were perfectly good hands, he thought. "Is there something wrong with them?"

Carpenter blushed and looked away. "Didn't you know that on Electra it is forbidden for anyone to appear in public with his hands bare?"

"Of course I know that," Michael said impatiently. "But what's that got to do with me?"

The salesman was wide-eyed. "But if it is forbidden on Electra, it becomes automatically prohibited here."

"But Electrans have eight fingers on each hand," Michael protested, "with two fingernails on each—all covered with green scales."

Carpenter drew himself up as far as it was possible to do so while lying down. "Do eight fingers make one a lesser Universal?"

"Of course not, but—"

"Is he inferior to you then because he has sixteen fingernails?"

"Certainly not, but—"

"Would you like to be called guilty of—" Carpenter paused before the dreaded word—"*intolerance?*"

"No, no, *no!*" Michael almost shrieked. It would be horrible for

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him to be arrested before he even had time to view Portyork. "I have lots of gloves in my pack," he babbled. "Lots and lots. I'll put some on right away."

WITH nervous haste, he pressed the lever which dropped his pack down from the storage compartment. It landed on his stomach. The device had been invented by one of the Dschubbans who are, as everyone knows, hoop-shaped.

Michael pushed the button marked *Gloves A*, and a pair of yellow gauntlets slid out.

Carpenter pressed his hands to his eyes. "Yellow is the color of death on Saturn, and you know how morbid the Saturnians are about passing away! No one *ever* wears yellow!"

"Sorry," Michael said humbly. The button marked *Gloves B* yielded a pair of rose-colored gloves which harmonized ill with his scarlet tunic and turquoise breeches, but he was past caring for esthetic effects.

"The quality's high," sang a quartet of beautiful female humanoids, "but the price is meager. You *know* when you buy Plummy Fruitcake from Vega."

The salesman patted Michael's shoulder. "You staying a while in Portyork?" Michael nodded. "Then you'd better stick close to me for a while until you learn our ways. You can't run around loose by yourself until you've acquired civilized behavior patterns, or you'll get into trouble."

"Thank you, sir," Michael said gratefully. "It's very kind of you."

He twisted himself around—it was boiling hot inside the jet bus and his damp clothes were clinging uncomfortably—and struck his head against the bottom of the shelf above. "Awfully inconvenient arrangement here," he commented. "Wonder why they don't have seats."

"Because this arrangement," Carpenter said stiffly, "is the one that has proved suitable for the greatest number of intelligent lifeforms."

"Oh, I see," Michael murmured. "I didn't get a look at the other passengers. Are there many extraterrestrials on the bus?"

"Dozens of them. Haven't you heard the Sirians singing?"

A low moaning noise had been pervading the bus, but Michael had thought it arose from defective jets.

"Oh, yes!" he agreed. "And very beautiful it is, too! But so sad."

"Sirians are always sad," the salesman told him. "Listen."

MICHAEL strained his ears past the racket of the advideo. Sure enough, he could make out

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words: "Our wings were unfurled in a far distant world, our bodies are pain-racked, delirious. And never, it seems, will we see, save in dreams, the bright purple swamps of our Sirius . . ."

Carpenter brushed away a tear. "Poignant, isn't it?"

"Very, very touching," Michael agreed. "Are they sick or something?"

"Oh, no; they wouldn't have been permitted on the bus if they were. They're just homesick. Sirians love being homesick. That's why they leave Sirius in such great numbers."

"Fasten your suction disks, please," the stewardess, a pretty two-headed Denebian, ordered as she walked up and down the gangway. "We're coming into Portyork. I have an announcement to make to all passengers on behalf of the United Universe. Zosma was admitted into the Union early this morning."

All the passengers cheered.

"Since it is considered immodest on Zosma," she continued, "ever to appear with the heads bare, henceforward it will be tabu to be seen in public without some sort of head-covering."

Wild scrabbling sounds indicated that all the passengers were searching their packs for headgear. Michael unearthed a violet cap.

The salesman unfolded what looked like a medieval opera hat in piercingly bright green.

"Always got to keep on your toes," he whispered to the younger man. "The Universe is expanding every minute."

The bus settled softly on the landing field and the passengers flew, floated, crawled, undulated, or walked out. Michael looked around him curiously. The Lodge had contained no extraterrestrials, for such of those as sought seclusion had Brotherhoods on their own planets.

Of course, even in Angeles he had seen other-worlders—humanoids from Vega, scaly Electrans, the wispy ubiquitous Sirians—but nothing to compare with the crowds that surged here. Scarlet Meropians rubbed tentacles with bulging-eyed Talithans; lumpish gray Jovians plodded alongside graceful, spidery Nunkians. And there were countless others whom he had seen pictured in books, but never before in reality.

The gaily colored costumes and bodies of these beings rendered kaleidoscopic a field already brilliant with red-and-green lights and banners. The effect was enhanced by Mr. Carpenter, whose emerald-green cloak was drawn back to reveal a chartreuse tunic and olive-green breeches which had apparently been designed for a taller and somewhat less pudgy man.

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CARPENTER rubbed modestly gloved hands together. "I have no immediate business, so supposing I start showing you the sights. What would you like to see first, Mr. Frey? Or would you prefer a nice, restful movid?"

"Frankly," Michael admitted, "the first thing I'd like to do is get myself something to eat. I didn't have any breakfast and I'm famished." Two small creatures standing close to him giggled nervously and scuttled off on six legs apiece.

"Shh, not so loud! There are females present." Carpenter drew the youth to a secluded corner. "Don't you know that on Theemim it's frightfully vulgar to as much as speak of eating in public?"

"But why?" Michael demanded in too loud a voice. "What's wrong with eating in public here on Earth?"

Carpenter clapped a hand over the young man's mouth. "Hush," he cautioned. "After all, on Earth there are things we don't do or even mention in public, aren't there?"

"Well, yes. But those are different."

"Not at all. Those rules might seem just as ridiculous to a Theemimian. But the Theemimians have accepted our customs just as we have accepted the Theemimians'. How would you like it if a Theemimian violated one of our tabus in public? You must consider the feelings of the Theemimians as equal to your own. Observe the golden rule: 'Do unto extraterrestrials as you would be done by.' "

"But I'm still hungry," Michael persisted, modulating his voice, however, to a decent whisper. "Do the proprieties demand that I starve to death, or can I get something to eat somewhere?"

"Naturally," the salesman whispered back. "Portyork provides for all bodily needs. Numerous feeding stations are

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conveniently located throughout the port, and there must be some on the field."

After gazing furtively over his shoulder to see that no females were watching, Carpenter approached a large map of the landing field and pressed a button. A tiny red light winked demurely for an instant.

"That's the nearest one," Carpenter explained.

INSIDE a small, white, functional-looking building unobtrusively marked "Feeding Station," Carpenter showed Michael where to insert a two-credit piece in a slot. A door slid back and admitted Michael into a tiny, austere room, furnished only with a table, a chair, a food compartment, and an advideo. The food consisted of tabloid synthetics and was tasteless. Michael knew that only primitive creatures waste time and energy in growing and preparing natural foods. It was all a matter of getting used to this stuff, he thought glumly, as he tried to chew food that was meant to be gulped.

A ferret-eyed Yeddan appeared on the advideo. "Do you suffer from gastric disorders? Does your viscera get in your hair? A horrid condition, but swift abolition is yours with Al-Brom from Altair."

Michael finished his meal in fifteen minutes and left the compartment to find Carpenter awaiting him in the lobby, impatiently glancing at the luminous time dial embedded in his wrist.

"Let's go to the Old Town," he suggested to Michael. "It will be of great interest to a student and a newcomer like yourself."

A few yards away from the feeding station, the travel agents were lined up in rows, each outside his spaceship, each shouting the advantages of the tour he offered:

"Better than a mustard plaster is a weekend spent on Castor."

"If you want to show you like her, take her for a week to Spica."

"Movid stars go to Mars."

Carpenter smiled politely at them. "No space trips for us today, gentlemen. We're staying on Terra." He guided the bewildered young man through the crowds and to the gates of the field. Outside, a number of surface vehicles were lined up, with the drivers loudly competing for business.

"Come, take a ride in my rocket car, suited to both gent and lady, lined with luxury *hukka* fur brought from afar, and perfumed with rare scents from Algedi."

"Whichever movid film you choose to view will be yours in my fine cab from Mizar. Just press a button—it won't cost you nuttin'—see a passionate drama

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of long-vanished Mu or the bloodhounds pursuing Eliza."

"All honor be laid at the feet of free trade, but, whatever your race or your birth, each passenger curls up with two dancing girls who rides in the taxi from Earth."

"Couldn't we — couldn't we walk? At least part of the way?" Michael faltered.

Carpenter stared. "Walk! Don't you know it's forbidden to walk more than two hundred yards in any one direction? Fomalhautians never walk."

"But they have no feet."

"That has nothing whatsoever to do with it."

CARPENTER gently urged the young man into the Algedian cab . . . which reeked. Michael held his nose, but his mentor shook his head. "No, no! Tpiu Number Five is the most esteemed aroma on Algedi. It would break the driver's heart if he thought you didn't like it. You wouldn't want to be had up for ego injury, would you?"

"Of course not," Michael whispered weakly.

"Brunettes are darker and blondes are fairer," the advideo informed him, "when they wash out their hair with shampoos made on Chara."

After a time, Michael got more or less used to Tpiu Number Five and was able to take some interest in the passing landscape. Portyork, the biggest spaceport in the United Universe, was, of course, the most cosmopolitan city—cosmopolitan in its architecture as well as its inhabitants. Silver domes of Earth were crowded next to the tall helical edifices of the Venusians.

"You'll notice that the current medieval revival has even reached architecture," Carpenter pointed out. "See those period houses in the Frank Lloyd Wright and Inigo Jones manner?"

"Very quaint," Michael commented.

Great floating red and green balls lit the streets, even though it was still daylight, and long scarlet - and - emerald streamers

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whipped out from the most unlikely places. As Michael opened his mouth to inquire about this, "We now interrupt the commercials," the advideo said, "to bring you a brand new version of one of the medieval ballads that are becoming so popular . . ."

"I shall scream," stated Carpenter, "if they play *Beautiful Blue Deneb* just once more . . . No, thank the Wise Ones, I've never heard this before."

"Thuban, Thuban, I've been thinking," sang a buxom Betelgeusian, "what a Cosmos this could be, if land masses were transported to replace the wasteful sea."

"I guess the first thing for me to do," Michael began in a businesslike manner, "is to get myself a room at a hotel . . . What have I said now?"

"The word *hotel*," Carpenter explained through pursed lips, "is not used in polite society any more. It has come to have unpleasant connotations. It means—a place of dancing girls. I hardly think . . ."

"Certainly not," Michael agreed austerely. "I merely want a lodging."

"That word is also—well, you see," Carpenter told him, "on Zaniah it is unthinkable to go anywhere without one's family."

"They're a sort of ant, aren't they? The Zaniahans, I mean."

"More like bees. So those creatures who travel—" Carpenter lowered his voice modestly "—*alone* hire a family for the duration of their stay. There are a number of families available, but the better types come rather high. There has been talk of reviving the old-fashioned price controls, but the Wise Ones say this would limit free enterprise as much as—if you'll excuse my use of the expression—tariffs would."

THE taxi let them off at a square meadow which was filled with transparent plastic domes housing clocks of all varieties, most of the antique type based on the old twenty-four hour day instead of the standard thirty hours. There were few extraterrestrial clocks because most nonhumans had time sense, Michael knew, and needed no mechanical devices.

"This," said Carpenter, "is Times Square. Once it wasn't really square, but it is contrary to Nekkarian custom to do, say, imply, or permit the existence of anything that isn't true, so when Nekkar entered the Union, we had to square off the place. And, of course, install the clocks. Finest clock museum in the Union, I understand."

"The pictures in my history books—" Michael began.

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"Did I hear you correctly, sir?" The capes of a bright blue cloak trembled with the indignation of a scarlet, many-tentacled being. "Did you use the word *history*?" He pronounced it in terms of loathing. "I have been grossly insulted and I shall be forced to report you to the police, sir."

"Please don't!" Carpenter begged. "This youth has just come from one of the Brotherhoods and is not yet accustomed to the ways of our universe. I know that, because of the great sophistication for which your race is noted, you will overlook this little gaucherie on his part."

"Well," the red one conceded, "let it not be said that Meropians are not tolerant. But, be careful, young man," he warned Michael. "There are other beings less sophisticated than we. Guard your tongue, or you might find yourself in trouble."

He indicated the stalwart constable who, splendid in gold helmet and gold-spangled pink tights, surveyed the terrain haughtily from his floating platform in the air.

"I should have told you," Carpenter reproached himself as the Meropian swirled off. "Never mention the word 'history' in front of a Meropian. They rose from barbarism in one generation, and so they haven't any history at all. Naturally, they're sensitive in the extreme about it."

"Naturally," Michael said. "Tell me, Mr. Carpenter, is there some special reason for everything being decorated in red and green? I noticed it along the way and it's all over here, too."

"Why, Christmas is coming, my boy," Carpenter answered, surprised. "It's July already—about time they got started fixing things up. Some places are so slack, they haven't even got their Mother's Week shrines cleared away."

A BEVY of tiny golden-haired, winged creatures circled slowly over Times Square.

"Izarians," Carpenter explained "They're much in demand for Christmas displays."

The small mouths opened and clear soprano voices filled the air: "It came upon the midnight clear, that glorious song of old, from angels bending near the Earth to tune their harps of gold. Peace on Earth, good will to men, from Heaven's All-Celestial. Peace to the Universe as well and every extraterrestrial . . . Beat the drum and clash the cymbals; buy your Christmas gifts at Nimble's."

"This beautiful walk you see before you," Carpenter said, waving an expository arm, "shaded by boogil trees from Dschubba, is called Broadway. To your left

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you will be delighted to see—"

"Listen, could we—" Michael began.

"—Forty-second Street, which is now actually the forty-second—"

"By the way—"

"It is extremely rude and hence illegal," Carpenter glared, "to interrupt anyone who is speaking."

"But I would like," Michael whispered very earnestly, "to get washed. If I might."

The other man frowned. "Let me see. I believe one of the old landmarks was converted into a lavatory. Only thing of suitable dimensions. Anyhow, it was absolutely useless for any other purpose. We have to take a taxi there; it's more than two hundred yards. Custom, you know."

"A taxi? Isn't there one closer?"

"Ah, impatient youth! There aren't too many altogether. The installations are extremely expensive."

They hailed the nearest taxi, which happened to be one of the variety equipped with dancing girls. Fortunately the ride was brief.

Michael gazed at the Empire State Building with interest. It was in a remarkable state of preservation and looked just like the pictures in his history—in his books, except that none of them showed the huge golden sign "Public Washport" riding on its spire.

Attendants directed traffic from a large circular desk in the lobby. "Mercurians, seventy-eighth floor. *A* group Vegans, fourteenth floor right. *B* group, fourteenth floor left. *C* group, fifteenth floor right. *D* group, fifteenth floor left. Sirians, forty-ninth floor. Female humans fiftieth floor right, males, fiftieth floor left. Uranians, basement . . ."

Carpenter and Michael shared an elevator with a group of sad-eyed, translucent Sirians, who were singing as usual and accompanying themselves on *wemps*, a cross between a harp and a flute.

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"Foreign planets are strange and we're subject to mange. Foreign atmospheres prove deleterious. Only with our mind's eye can we sail through the sky to the bright purple swamps of our Sirius."

The cost of the compartment was half that of the feeding station; one credit in the slot unlocked the door. There was an advideo here, too:

"Friend, do you clean yourself each day? Now, let's not be evasive, for each one has his favored way. Some use an abrasive and some use oil. Some shed their skins, in a brand-new hide emerging. Some rub with grease put up in tins. For others there's deterging. Some lick themselves to take off grime. Some beat it off with rope. Some cook it away in boiling lime. Old-fashioned ones use soap. More ways there are than I recall, and each of these will differ, but the only one that works for all is Omniclene from Kiffa."

"AND now," smiled Carpenter as the two humans left the building, "we must see you registered for a nice family. Nothing too ostentatious, but, on the other hand, you mustn't count credits and ally yourself beneath your station."

Michael gazed pensively at two slender, snakelike Difdans writhing "Only 99 Shopping Days Till Christmas" across an aquamarine sky.

"They won't be permanent?" he asked. "The family, I mean?"

"Certainly not. You merely hire them for whatever length of time you choose. But why are you so anxious?"

The young man blushed. "Well, I'm thinking of having a family of my own some day. Pretty soon, as a matter of fact."

Carpenter beamed. "That's nice; you're being adopted! I do hope it's an Earth family that's chosen you—it's so awkward being adopted by extraterrestrials."

"Oh, no! I'm planning to have my own. That is, I've got a—a girl, you see, and I thought after I had secured employment of some kind in Portyork, I'd send for her and we'd get married and . . ."

"*Married!*" Carpenter was now completely shocked. "You *mustn't* use that word! Don't you know marriage was outlawed years ago? Exclusive possession of a member of the opposite sex is slavery on Talitha. Furthermore, supposing somebody else saw your—er—friend and wanted her also; you wouldn't wish him to endure the frustration of not having her, would you?"

Michael squared his jaw. "You bet I would."

Carpenter drew himself away slightly, as if to avoid contamina-

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tion. "This is un-Universal. Young man, if I didn't have a kind heart, I would report you."

Michael was too preoccupied to be disturbed by this threat. "You mean if I bring my girl here, I'd have to share her?"

"Certainly. And she'd have to share you. If somebody wanted you, that is."

"Then I'm not staying here," Michael declared firmly, ashamed to admit even to himself how much relief his decision was bringing him. "I don't think I like it, anyhow. I'm going back to the Brotherhood."

There was a short, cold silence.

"You know, son," Carpenter finally said, "I think you might be right. I don't want to hurt your feelings—you *promise* I won't hurt your feelings?" he asked anxiously, afraid, Michael realized, that he might call a policeman for ego injury.

"You won't hurt my feelings, Mr. Carpenter."

"Well, I believe that there are certain individuals who just cannot adapt themselves to civilized behavior patterns. It's much better for them to belong to a Brotherhood such as yours than to be placed in one of the government incarceratoriums, comfortable and commodious though they are."

"Much better," Michael agreed.

"By the way," Carpenter went on, "I realize this is just vulgar curiosity on my part and you have a right to refuse an answer without fear of hurting my feelings, but how do you happen to have a—er—girl when you belong to a Brotherhood?"

Michael laughed. "Oh, 'Brotherhood' is merely a generic term. Both sexes are represented in our society."

"On Talitha—" Carpenter began.

"I know," Michael interrupted him, like the crude primitive he was and always would be. "But our females don't mind being generic."

A GROUP of Sirians was traveling on the shelf above him on the slow, very slow jet bus that was flying Michael back to Angeles, back to the Lodge, back to the Brotherhood, back to her. Their melancholy howling was getting on his nerves, but in a little while, he told himself, it would be all over. He would be back home, safe with his own kind.

"When our minds have grown tired, when our lives have expired, when our sorrows no longer can weary us, let our ashes return, neatly packed in an urn, to the bright purple swamps of our Sirius."

The advideo crackled: "The gown her fairy godmother once

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gave to Cinderella was created by the haute couture of fashion-wise Capella."

The ancient taxi was there, the one that Michael had taken from the Lodge, early that morning, to the little Angeleno landing field, as if it had been waiting for his return.

"I see you're back, son," the driver said without surprise. He set the noisy old rockets blasting. "I been to Portyork once. It's not a bad place to live in, but I hate to visit it."

"I'm back!" Michael sank into the motheaten sable cushions and gazed with pleasure at the familiar landmarks half seen in the darkness. "I'm back! And a loud sneer to civilization!"

"Better be careful, son," the driver warned. "I know this is a rural area, but civilization is spreading. There are secret police all over. How do you know I ain't a government spy? I could pull you in for insulting civilization."

The elderly black and white advideo flickered, broke into purring sound: "Do you find life continues to daze you? Do you find for a quick death you hanker? Why not try the new style euthanasia, performed by skilled workmen from Ancha?"

Not any more, Michael thought contentedly. He was going home.

—EVELYN E. SMITH

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(*Continued from page 3*)
we react if we were unexpectedly pushed into them?

• You suddenly have a chance to sign on an interplanetary or interstellar spaceship. True enough, volunteers can be found for any deadly mission; their fear is so great, generally, that they must constantly challenge it to master it. But I'm assuming you're healthily cautious, like most of us.

Would you sign on? The ship is huge on Earth, but how small would it seem in space? How well do you think you'd take the monotony, the weightlessness, the awful infinity? What about the prospects of landing safely, living and exploring for a while on a totally alien world—and the return trip?

• A strange ship lands in your yard and weird creatures emerge. How would you feel and what would you do?

• Bombs destroy the entire population, leaving you apparently the only person alive. What would your thoughts be? Would you be able to live with your grief and horror? Would you risk your life searching for another survivor, preferably, in the last-man tradition, of the opposite sex? And suppose you did find one—somebody unusually revolting; would you overcome your repugnance in order to keep the race going? And what if you found no one at all, but, instead, absolute proof that everyone else had been wiped out?

• The inventor of a time machine invites you to travel anywhere in time you choose to go. For the sake of exciting ideas, we blandly ignore the enormous difficulty of pinpointing a target as tiny as Earth, which moves around the Sun, with the Solar System, the Galaxy and the Universe, at a speed and in a direction we have not been able to determine. You might go into the past or future and find yourself stranded in space!

But suppose you could land wherever and whenever you want. Would you choose to contend with the disease, superstitious suspicion and savagery of the past, the language barriers and vast disparity of ideas? Could you feel comfortable in a slave society? Or keep safely quiet about beliefs which would be suicidal to correct?

The future? Think how an ancient Greek or Roman would fare in our civilization. The future may be just as far removed in change of all sorts. It's not even necessary to bring an ancient Greek to the 20th century to get him in trouble; he would have found his enquiring mind and free expression a menace in the Middle Ages.

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• Immortality is offered you. Would you accept it, knowing you would outlive all your friends and relatives? Could you cope with the boredom that seems so inevitable?

THESE aren't fair tests of heroism, I realize. They deal only with anticipation, because the reality is unlikely to be experienced and, since that's so, we can't estimate reaction. That, as you know, can be anything from the shakes to outright psychological collapse.

One odd thing about the realistic treatment of heroism is that most readers object to it. Examined superficially, this is a paradox—they don't believe in it, yet they dislike a hero who does not act like one.

But consider it this way:

• The majority of us want to identify with heroes who do not suffer from our own caution or apprehension. I don't see why we shouldn't want to. Where's the percentage in identifying with someone just like us? We know our own attitudes pretty well; we'd like to see how someone else feels and acts in tight spots.

• Training and conditioning have a good deal to do with performance. We might not be happy in a jet plane or submarine, but at least we know what they are and something of what to expect in them. A primitive, though, would be overcome with terror on a jet or submarine ride.

In other words, living in a civilization in which spaceships and time machines are relatively commonplace is not the same as abruptly encountering them. A hero of an interplanetary war, in that case, is no less probable than a jet ace, an elevator operator in a skyscraper, or a pedestrian crossing a busy street. Any of these undertakings would be dangerous to somebody who wasn't quite thoroughly trained or conditioned to it.

• For all the premonitory worry we might feel, I think most of us know we'd do all right in similar situations, given the same training and conditioning as our fictional heroes. This is not an unrealistic assumption. It is borne out by the courage shown by almost whole populations under bombing and enemy invasion, resourcefulness during flood, quake, famine.

It's the imaginary danger that creates apprehension. A real one can usually be counted on to be confronted bravely — heroically, if you wish.

But what would go through your mind and what would you do if you were in one of the situations described?

—H. L. GOLD

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The Mousetrap

By GORDON R. DICKSON

A luxuriously furnished world all to himself! Very pleasant but how and why was he there?

Illustrated by KARL ROGERS

THERE was nothing to do. There was no place to go.

He swam up to consciousness on the sleepy languor of that thought. Nothing to do, no place to go, tomorrow is forever. Could sleep, but body wants to wake up. His body was a cork floating up from deep water, up, up to the surface.

He opened his eyes. Sunlight and blue sky; sky so blue that if you looked at it long enough you could begin to imagine yourself

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falling into it. No clouds; just blue, blue sky.

He felt as if he had slept the clock of eternity around and back again until the hands of time were in the same position they had held when he went to sleep. When had that been? It was a long time ago, too far back to remember. He stopped worrying about it.

He lay supine, his arms flung wide, his legs asprawl. He became conscious of short blades of grass tickling the backs of his hands. There was a tiny breeze from somewhere that now and again brushed his face with its cool wing. And an edge of white cloud was creeping into the patch of blue that gradually filled his field of vision.

Slowly, physical awareness crept back to him. He felt smooth, loose clothing lying lightly against his skin, the expansion and contraction of his chest, the hard ground pressure against the long length of his back. And suddenly he was complete. The thousand disconnected sensations flowed together and became one. He was aware of himself as a single united entity, alive and alone, lying stretched out, exposed and vulnerable in an unknown place.

Brain pulsed, nerves tensed, muscles leaped.

He sat up.

"Where am I?"

HE sat on a carpet of green turf that dipped gradually away ahead and on either side of him to a ridiculously close horizon. He twisted his head and looked over his shoulder. Behind him was a gravel walk leading to a small building that looked very airy and light. The front, beneath a thick ivory roof that soared flat out, apparently unsupported for several yards beyond the front itself, was one large window. He could see, like looking into the cool dimness of a cave, big, comfortable chairs, low tables, and what might possibly be a viseo.

Hesitantly, he rose to his feet and approached the building.

At the entrance he paused. There was no door, only a variable force-curtain to keep the breezes out; and he pushed his hand through it carefully, as if to test the atmosphere inside. But there was only the elastic stretch and sudden yield that was like pushing your fist through the wall of a huge soap bubble, and then a pleasant coolness beyond, so he withdrew his hand and, somewhat timidly, entered.

The room illuminated itself. He looked around. The chairs, the tables, everything was just as he had seen it from outside, through the window. And the thing that looked like a viseo *was* a viseo.

He walked over to it and ex-

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amined it curiously. It was one of the large models, receiver and record-player, with its own built-in library of tapes. He left it and went on through an interior doorway into the back of the house.

Here were two more rooms, a bedroom and a kitchen. The bed was another force-field—expensive and luxurious. The kitchen had a table and storage lockers through whose transparent windows he could see enough eatables and drinkables stored there to last one man a hundred years.

At the thought of one man living in this lap of luxury for a hundred years, the earlier realization that he was alone came back to him. This was not his place. It did not belong to him. The owner could not be far off.

He went hurriedly back through the living room and out into the sunlight. The green turf stretched away on every side of him, empty, unrelieved by any other living figure.

"Hello!" he called.

His voice went out and died, without echoes, without answer. He called again, his voice going a trifle shrill.

"Hello? Anybody here? Hello! *Hello!*"

There was no answer. He looked down the gravel path to his right, to the short horizon. He looked down the path to his left and his breath caught in his throat.

He began to run in a senseless, brain-numbing, chest-constricting panic.

THE grass streamed silently by on both sides of him, and his feet pounded on the gravel of the path. He ran until his lungs heaved with exhaustion and the pounding of his heart seemed to shake his thin body, when at last fatigue forced him to a halt. He stood and looked around him.

The building was out of sight now, and he found himself on the edge of a forest of tall flowers. Ten feet high or more, they lay like a belt across his way, and the path led through them. Green-stemmed, with long oval leaves gracefully reaching out, with flat, broad-petaled blue blossoms spread to the bright sky, they looked like the graceful creations of a lost dream. There was no odor, but his head seemed to whirl when he looked at them.

Somehow they frightened him; their height and their multitude seemed to look down on him as an intruder. He hesitated at that point where the path began to wind among them, no longer straight and direct as it had been through the grass. He felt irrational fear at the thought of pushing by them—but the loneliness behind him was worse.

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He went on.

Once among the flowers, he lost all sense of time and distance. There was nothing but the gravel beneath his feet, a patch of blue sky overhead and the flowers, only the flowers. For a while he walked; and then, panic taking him again at the apparent endlessness of the green stems, he burst into a fear-stricken run which ended only when exhaustion once more forced him to a walk. After that, he plodded hopelessly, his desire to escape fighting a dull battle with increasing weariness.

HE came out of it suddenly. One moment the flowers were all around him; then the path took an abrupt twist to the right and he was standing on the edge of a new patch of turf through which the path ran straight as ever.

He stopped, half disbelieving what he saw. With a little inarticulate grunt of relief, he stepped free of the flower-shadowed pathway and went forward between new fields of grass.

He did not have much farther to go. In a few minutes he topped a small rise and his walk came to an end.

There, in front of him, was the building.

The very same building he had run away from earlier.

HE approached it slowly, trying to cling to the hope that it was not the same building, that he had somehow gone somewhere else, rather than that he had traveled in a circle. But the identity was too complete. There was the large window, the chairs, the viseo. There was the door to the bedroom and the one to the kitchen.

Moving like a man in a dream, he walked forward and into the house.

He knew where he was going now. He remembered what he had seen before—a bottle of light, amber-colored liquid among the stores in the kitchen. He found it among a thickly crowded bank of others of its kind and took off the cap humbly. He put the bottle to his lips.

The liquor burned his throat. Tears sprang to his eyes at the fire of it and he was glad, for the sensation gave him a feeling of reality that he had not yet had among the dreamlike emptiness of his surroundings.

Taking the bottle, he went outside to the grass in front of the building.

"This is good," he thought, taking another drink, and sitting down on the grass. "This is here and now, a departure point from which to figure out the situation. *I drink, therefore I am.* The beginning of a philosophy."

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He drank again.

"But where do I go from there? Where is this? Who am I?"

He frowned suddenly. Well, who was he? The question went groping back and lost itself in a maze of shadows where his memory should have been. Almost, but not quite, he knew. He shook his head impatiently.

"Never mind that now. Plenty of time to figure that out later. The thing is to discover where I am, first."

Where was he, then? The drink was beginning to push soft fingers of numbness into his mind. The grass was Earth grass and the building was a human-type structure. But the flowers weren't like anything on Earth. Were they like anything on any other planet he'd ever been on?

He wrinkled his forehead in a frown, trying to remember. If only he could recall where he had been before he woke up! He thought he had been on Earth, but he wasn't sure. The things he wanted to remember seemed to skitter away from his recollection just before he touched them.

He lay back on the grass.

Where was he? He was in a place where one walked in circles. He was in a place where things were too perfect to be natural. The grass looked like a lawn and there were acres of it. There were acres of flowers, too. But the grass was real grass; and from what he'd seen of the flowers, they were real and natural as well.

Yet there was something wrong. He felt it. There was a strange air of artificiality about it all.

He lay back on the grass, staring at the sky and taking occasional drinks from the bottle. Without realizing it, he was getting very drunk.

His mind cast about like the nose of a hunting dog. Something about the place in which he found himself was wrong, but the something continued to elude him. Maybe it had to do with the fact that he couldn't seem to remember things. Whatever it was, it was something that told him clearly and unarguably that he wasn't on Earth or any of the planets he'd ever known or heard of.

He looked to the right and he looked to the left. He looked down and he looked up, and realization came smashing through the drunken fog in his mind.

There was no Sun in the sky.

He rose to his feet, the bottle in his hand, for a horrible suspicion was forming in his mind. He turned away from the house, looked at the chronometer on his wrist and began to walk.

When he got back to the house, the bottle in his hand was empty. But all the alcohol inside him

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could not shut out the truth from his mind. He was alone, on a tiny world that was half green grass and half great blue flowers. A pretty world, a silent, dreaming world beneath a bright, eternal sky. An empty world, and he was on it—

Alone.

HE went away from the world, as far as drink would take him. And for many days—or was it weeks?—reality became a hazy thing, until the poor, starved body could take no more and so collapsed. Then there was no remembrance, but when he came back to himself at last, he found a little miracle had happened during that blank period.

Memory of a part of his life had come back to him.

BORN and raised on Earth, in Greater Los Angeles, he had been pitched neck and crop off his native planet at the age of twenty-one, along with some other twenty million youngsters for which overcrowded Earth had no room. Overpopulation was a problem. Those without jobs were deported when they reached the age of maturity. And what chance had a poor young man to get an Earthside job when rich colonials wanted them? For Earth was the center of government and trade.

He was spared the indignity of deportation. His family scraped up the money for passage to Rigel IV and arranged a job in a typographers' office for him there. They would continue to pull strings, they said, and he was to work hard and save as much as he could in the hope of being able eventually to buy his way back—although this was a forlorn hope; the necessary bribes for citizenship would run to several million credits. They saw him off with a minimum of tears; Father, Mother, and a younger sister, who herself would be leaving in a couple of years.

He went on to Rigel IV, filled with the determination of youth to conquer all obstacles; to make his fortune in the approved fashion and return, trailing clouds of glory, to his astounded and delighted parents.

But Rigel IV proved strangely indifferent to his enthusiasm. The earlier colonists had seen his kind before. They resented his Earth-pride, they laughed at his squeamishness where the local aliens were concerned, and they played upon his exaggerated fears of the *Devils*, as the yet-unknown alien races beyond the spatial frontier were called. They had only contempt for his job in the typographers' office and no one liked him well enough to offer him any other occupation.

So he sat at his desk, turning

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out an occasional map copy on his desk duplicator for the stray customers that wandered in. He stared out the window at the red dust in the streets and in the air, calculating over and over again how many hundreds of years of hoarding his salary would be required to save up the bribe money for citizenship, and dreaming of the lost beauty of the cool white moonlight of Earth.

ABOVE all else, he remembered and yearned for moonlight. It became to him the symbol of all that he wished for and could not have. And he began to seek it —more and more often—in the contents of a bottle.

And so the breakup came. Though there was little to do at his job, a time came when he could not even do that, but sprawled on his bed in the hotel, dreaming of moonlight, while the days merged one into the other endlessly.

Termination came in the form of a note from his office and two months' salary.

Further than that, his recovered memory would not go. He lay for the equivalent of some days, recuperating; and when he was able to move around again, he discovered to his relief that he was now able to leave the remaining bottles in the liquor section alone.

SHORTLY after, he discovered that the house walls were honeycombed with equipment and control panels, behind sliding doors. He gazed at these with wonder, but for some reason could not bring himself to touch them.

One in particular drew him and repelled him even more than the rest. It was by far the simplest of the lot, having only four plain switches on it. The largest one, a knife switch with a red handle, exerted the strongest influence over him. The urge to pull it was so strong that he could not bear to stand staring at it for more than a few minutes, without reaching out his hand toward it. But no sooner did his fingertips approach the red handle than a reaction set in. A paralysis rooted him to the spot, his heart pounded violently, and sweat oozed coldly from his pores. He would be forced then to close the panel and not go back to it for several hours. Finally, he compromised with his compulsion. There were three smaller switches: and finally, gingerly, he reached out his hand to the first of these, one time when he had been staring at it, and pulled it.

The light went out.

He screamed in blind animal fear and slapped wildly at the panel. The switch moved again beneath his hand and the light

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came back on. Sobbing, he leaned against the panel, gazing in overwhelming relief out through the big front window at the good green grass and the brightness of the sky beyond.

It was some time before he could bring himself to touch that switch again. Finally he summoned up the nerve to pull it once more and stood a long while in the darkness, with thudding heart, letting his eyes grow accustomed to it.

Eventually he found he could see again, but faintly. He groped his way through the gloom of the front room and lifted his face to the sky outside, from which the faint glow came.

And this time he did not cry out.

The night sky was all around him and filled with stars. It was the bright shine of them that illuminated his little world with a sort of ghostly brilliance. Stars, stars, in every quarter of the heavens, stars. But it was not just their presence alone that struck him rigid with horror.

Like all of his generation, he knew how the stars looked from every planet owned by man. What schoolchild did not? He could glance at the stars from a position in any quarter of the human sector of space and tell roughly from the arrangement overhead where that position was. Consequently, his sight of the stars told him where he was now; and it was this knowledge that gripped him with mind-freezing terror.

He was adrift, alone on a little, self-contained world, ten miles in diameter, a pitiful little bubble of matter, in the territory of the *Devils*, in the unknown regions *beyond the farthest frontier*.

He could not remember what happened immediately after that. Somehow, he must have gotten back inside and closed the light switch, for when he woke again to sanity, the light had hidden the stars once more. But fear had come to live with him. He knew now that malice or chance had cut him irrevocably off from his own kind and thrust him forth to be the prey or sport of whatever beings held this unknown space.

But from that moment, memory of his adult life began to return. Bit by bit, from the further past, and working closer in time, it came. And at first he welcomed almost sardonically the life-story it told. Now that he knew where he was, whatever his history turned out to be, it could make no difference.

As time went on, though, interest in the man he had been obsessed him, and he seized on each individual recollection as it emerged from the mist, grasping

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at it almost frantically. The viseo that he kept running, purely for the sake of human-seeming companionship, played unheeded while he hunted desperately through the hazy corridor of his mind.

HE remembered his name now. It was Helmut Perran.

Helmut Perran had gone from despondency to hopelessness after his dismissal from the job at the typographers. He was a confirmed alcoholic now, and with the labor shortage common on an expanding planet, he had no trouble finding enough occasional work to keep himself in liquor. He nearly succeeded in killing himself off, but his youth and health saved him.

They dragged him back to existence in the snake ward of the local hospital, and psychoed a temporary cure on him. Helmut had gone downhill socially until he reached rock bottom, until there was no further for him to go. He began to come back up again, but by a different route.

He came up in the shadowy no-man's-land just across the border of the law. He was passer, pimp and come-on man. He fronted for a gambling outfit. He made some money and went into business for himself as a promoter of crooked money-making schemes, and he ended as advance agent for a professional smuggling outfit.

Oddly enough, the business was only technically illegal. With the mushroom growth of the worlds, dirty politics and graft had mushroomed as well. Tariffs were passed often for the sole purpose of putting money in the pockets of customs officials. Unnecessary red tape served the same purpose. The upshot was that graft became an integral part of interstellar business. The big firms had their own agents to cut through these difficulties with the golden knife of credits. The smaller firms, or those who could less afford the direct graft, did business with smuggling outfits.

These did not actually smuggle; they merely saw to it that the proper men and machines were blind when a shipment that had been arranged for came through regular channels. They dealt with the little men—the spaceport guard, the berthing agent, the customs agent who checked the invoice—where the big firms made direct deals with the customs house head, or the political appointee in charge of that governmental section. It was more risky than the way of the big firms, but also much less expensive.

Helmut Perran, as advance agent, made the initial contacts. It was his job to determine wha

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were the men who would have to be fixed, to take the risk of approaching them cold, and either to bribe them into cooperation or make sure that another man who could be bribed took their place at the proper time.

It was a job that paid well. But by this time, Helmut was ambitious. He was sick of illegality and he thought he saw a way back to Earth and the moonlight. He shot for a job as fixer with one of the big firms that dealt directly with the head men in Customs—and got it.

It was as simple as that. He was now respectable, wealthy, and his chance would come.

He worked for the big firm faithfully for five years before it did. Then there came along a transfer of goods so large and involved that he was authorized to arrange for bribes of more than three million credits. He made the arrangement, took the credits, and skipped to Earth, where, with more than enough money to cover it, he at last bought his coveted Earth citizenship.

After that, they came and got him, as he knew they would. They got him a penal sentence of ten years, but they couldn't manage revocation of the citizenship. Through the hell of the little question room and the long trial, he carried a miniature picture in his mind of the broad white streets of Los Angeles in the moonlight and the years ahead.

BUT there the memory ended. He had a vague recollection of days in some penal institution, and then the mists were thick again. He beat hard knuckles against his head in a furious rage to remember.

What had happened?

They couldn't have touched him while he was serving his sentence. And once he had put in his ten years, he would be a free man with the full rights of his Earth citizenship. Then let them try anything. They were a firm of colossal power, but Earth was filled with such colossi; and the Earth laws bore impartially on all. What, then, had gone wrong?

He groaned, rocking himself in his chair like a child, in his misery. But he was close to the answer, so close. Give him just a bit more time—

But he was not allowed the time. Before he could bring the answer to the front of his mind, the *Devils* came.

Their coming was heralded by the high-pitched screaming of a siren, which cut off abruptly as the spaceship came through the bright opaqueness of the sky, like the Sun through a cloud, and dropped gently toward the

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ground. its bright metal sides gleaming as if they had been freshly buffed. It landed not fifty feet from him. The weight of it sank its rounded bottom deep beneath the surface of the sod, so that it looked like a huge metal bowl turned face-down on the grass.

A port opened in its side and two bipedal, upright creatures stepped out of it and came toward him.

As they approached him, time seemed to slip a cog and move very slowly. He had a chance to notice small individual differences between them. They were both shorter than he by at least a head, although the one on Helmut's left was slightly taller. They were covered with what seemed to be white fur, all but two little black buttons of eyes apiece. And they seemed to have more than the ordinary number of joints in their legs and arms, for these limbs bent like rubber hose when they walked or gesticulated. They were carrying a square box between them.

Helmut stood still, waiting for them. The only thought in his mind was that now he would never get to know how he had happened to be here, and he was sorry, for he had grown fond of the man he had once been, not the one he later turned out to be, as you might be fond of a distant relative. Meanwhile, he could feel his breath coming with great difficulty and his heart thumping inside him as it had thumped that time he had first tried the switch that turned off the light.

He watched them come up to a few feet from him and set the box down.

As soon as it was resting on the grass, it began to vibrate and a hum came from it that was pitched at about middle C. It went up in volume until it was about as loud as a man saying "aaaah" when a doctor holds down his tongue with a depresser to look at his throat. When it had reached this point, it broke suddenly from a steady sound into a series of short, intermittent hums that gradually resolved themselves into syllables. He realized that the box was talking to him, one syllable at a time.

"Do no t be af rai d," it said. "We wi sh to tal k to you."

Helmut said nothing. He wanted to hear what the box had to say, but, at the same time, a compulsion was mounting within him. It screamed that these others were horrible and unnatural and dangerous, that nothing they said was true, that he must turn and run to safety before it was too late.

They had been watching him for a long time, the box went on to tell him. They had listened

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from a safe distance to the viseo tapes he had run on the machine and finally translated his language. They had done their best to understand him from a distance and had failed, for he seemed to be unhappy and to dislike being where he was and what he was doing. And if this was so, why was he doing it? They did not understand. Where had he come from and who was he? Why was he here?

Helmut looked at the four little black eyes that gazed at him like the puzzled, half-friendly eyes of a bear he had seen in a zoo while he was a boy back on Earth. There was no possible way for white-furred faces to have shown expression, but he thought he read kindness in them, and the long loneliness of his stay on the sphere rose up and almost choked him with a desire to answer them. But that savagely irrational corner of his mind surged forward to combat the impulse toward friendliness.

He opened his mouth. Only a garbled croak came out.

He turned and ran.

He raced to the building and burst through the entrance. He threw himself at the panel that hid the switches, pulling it open and sliding aside the door that covered them. He reached for the red-handled switch, hesitated, and looked over his shoulder at the two creatures. They stood as he had left them. For the last time, he wavered under the urge to go back to them, to tell them his story, at least to listen to their side once—first.

But they were Devils!

The fear and anger inside him surged up, beating down everything else. He grasped the red switch firmly and threw it home.

What followed after that was nightmare.

HE had been sitting for a long time in the cold hall and nobody had paid any attention to him. Occasionally, men in Space Guard uniforms or the white coats of laboratory workers would go past him into the Warden's office, and come out again a little later. But all of these went past him as if he did not exist.

He shifted uncomfortably in the chair they had given him. They had outfitted him in fresh civilian clothes, which felt clinging and uncomfortable after the long months of running around on the sphere half-naked. The clothes, like the stiff waiting-room chair, the hall, and the parade of passing men all chafed on him and shrieked at him that he did not belong. He hated them.

The parade in and out of the office went on.

Finally, the door to the office opened and a young Guardsman

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stuck his head out.

"You can come in now," he said.

Helmut got to his feet. He did it awkwardly, the unaccustomed clothing seeming to stick to him, his legs half-asleep from the long wait in the chair.

He walked through the door and the young Guard shut it behind him. The Warden, a spare man of Helmut's age, with a military stiffness in his bearing and noncommittal mouth and eyes, looked up from his desk.

"You can go, Price," he said to the Guard; and, to Helmut, "Sit down, Perran."

Helmut lowered himself clumsily into the armchair across the desk from the Warden as the young Guardsman went out the door. The Warden stared at him for a moment.

"Well, Perran," he said, "you deserve to congratulate yourself. You're one of our lucky ones."

Helmut stared back at him, numbly, for a long time. Then, abruptly, it was like being sick. Without warning, a sob came choking up in his throat and he laid his head on the desk in front of him and began to cry.

The Warden lit a cigarette and smoked it for a while, staring out the window. The sound of Helmut's sobs was strained in the silence of the office. When they had dwindled somewhat, the Warden spoke again to Helmut.

"You'll get over it," he said. "That's just the conditioning wearing off. If you didn't break down and cry, you'd have been in serious psychological trouble. You'll be all right now."

Helmut lifted his head from the desk.

"What happened to me?" he asked, his throat hoarse. "What happened?"

The Warden puffed on his cigarette. "You were assigned to one of our Mousetraps," he answered. "It's a particularly hazardous duty for which criminals can volunteer. Normally, we only get men under death sentence or those with life terms. You're an exception."

"But I *didn't* volunteer!"

"In your case," said the Warden, "there may have been some dirty work along the line. We are investigating. Of course, if that turns out to be the case, you'll be entitled to reparation. I don't suppose you remember how you came to be on the Mousetrap, do you?"

HELMUT shook his head.

"It's not surprising," said the Warden. "Few do, although, theoretically, the conditioning is supposed to disappear after you capture a specimen. Briefly, you were given psychological treatment in order to fit you for ex-

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istence alone in the Mousetrap. It's necessary, because usually our Baits live their life out on the sphere without attracting any alien life. You were one of the lucky ones, Perran."

"But what is it?" asked Helmut. "What is it for?"

"The Mousetrap system?" the Warden answered. "It's our first step in the investigation of alien races with a view to integrating them into human economy. We take a sphere like the one you were on, put a conditioned criminal on it, and shove it off into unexplored territory where we have reason to suspect the presence of new races. With luck, the alien investigates the sphere and our conditioned Bait snaps the trap shut on him. Lacking luck, the Mousetrap is either not investigated or the aliens aren't properly trapped. Our conditioned man, in that case, blows it up—and himself along with it.

"As I say, you were lucky. You're back here safe on Kronbar, and we've got a fine couple of hitherto undiscovered specimens for our laboratory to investigate. What if those creatures had beaten you to the switch?"

Helmut shuddered and covered his eyes, as if, by doing so, he could shut the memory from his mind.

"The Guard Ship was so long coming," he muttered. "So long! Days. And I had to watch them all that time caught in a force-field like flies in a spider web. I couldn't go away without stepping out of the building and being caught myself. And they kept talking to me with that little box of theirs. They couldn't understand why I did it. They kept asking me over and over again why I did it. But they got weaker and weaker and finally they died. Then they just hung there because the force-field wouldn't let them fall over."

His voice dwindled away.

The Warden cleared his throat with a short rasp. "A trying time, I'm sure," he said. "But you have the consolation of knowing that you have performed a very useful duty for the human race." He stood up. "And now, unless you have some more questions—"

"When can I go home?" asked Helmut. "Back to Earth."

The Warden looked a trifle embarrassed. "Your capture of the aliens entitles you to a pardon; and of course you have Earth Citizenship—but I'm afraid we won't be able to let you leave Kronbar."

Helmut stared at him from a face that seemed to have gone entirely wooden. His lips moved stiffly.

"Why not?" he croaked.

"Well, you see," said the Warden, leading the way to a dif-

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ferent door than the one through which Helmut had entered, "these specimens you brought back seem to be harmless, and inside of a month or two we'll probably have a task force out there to put them completely under our thumb. But we've had a little trouble before, when we'd release a Bait and it would turn out later that the aliens had in some way *infected* him. So there happens to be a blanket rule that successful Baits have to live out the rest of their life on Kronbar." He opened the door invitingly. "You can go out this way, if you want. Private entrance. It leads directly to the street."

SLOWLY, Helmut rose to his feet and shambled over to the door. For one last time a vision of moonlight on the bay at Santa Monica mocked him. A wild scheme flashed through his head in which he overpowered the Warden, stole his uniform and bluffed his way to a Guard Patrol ship, where he forced the crew to take him either to Earth, or, failing that, out beyond the Frontier to warn the white-furred kin of the two alien beings he had killed.

Then the scheme faded from his mind. It was no use. The odds were too great. There were too many like the Warden. There were always too many of them for Helmut and those like him. He turned away from the Warden, ignoring the Warden's outstretched hand.

He went out the door and down the steps into the brilliant daylight of Kronbar.

Kronbar, the Bright Planet, so-called because, since it winds an eccentric orbit around the twin stars of a binary system, there is neither dark nor moonlight, and the Sun is always shining.

—GORDON R. DICKSON

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TALES FROM THE UNDERWOOD by David H. Keller. Arkham House-Pellegrini & Cudahy, New York, 1952. 322 pages, $3.95

FLAT statement: This is a must for anyone who has the slightest interest in the origins of modern science fiction and the works of its Old Masters.

This does not mean that all 23 stories in the book are masterpieces; far from it. Dr. Keller is an uneven writer and some of the tales have an almost juvenile touch to them. It does not mean, either, that the stories are all science fiction.

Dr. Keller divides his book into thirds—science fiction, fantasy, and psychiatry. The latter stories are classifiable either as fantasy or as science fiction, true, but they have an added quality stemming from the fact that they are written by a physician with a perceptive knowledge of the human mind.

Mistake it not, these stories are genuinely good reading, with very few exceptions; and, in addition, they are also highly original as ideas.

For the information of collectors, only four tales have been previously anthologized: "The Worm," "The Literary Corkscrew," "The Revolt of the Pe-

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destrians," and "The Ivy War" of horrid memory.

THE MIXED MEN by A. E. van Vogt. Gnome Press, New York, 1952. 223 *pages,* $2.75

THIS handsomely jacketed book, the fourth van Vogt to be reviewed in these columns since January of this year, has finally crystalized an opinion I have been coming to for a number of years.

A. E. van Vogt is not a science fiction writer. He is a science fantasist, a teller of impossible fairy tales with a pseudo- or semi-scientific frame. This does not detract from my pleasure in reading his books, but it does shift one's view of science fiction, and delimits the field considerably. Perhaps it needed it.

In van Vogt, a concept usually is poetic rather than scientific. His formula is grandiose, perhaps a little megalomaniac, but undeniably imaginative—product of a mind that will not be tied down by the basics of the modern physical, chemical, or psycho-biological sciences.

In the present slim book, made up of three novelets from *Astounding* during the 1943-1945 heyday, we have the following wonders: (1) An Earth-origin civilization on the "Planets of the Fifty Suns" in the Magellanic Clouds. (2) The concept that this civilization grew from a small group of men who had been "Dellianized," or made into supermen by being passed through a matter transmitter and thus given supernal powers. (3) The notion that these Dellians and non-Dellians (i.e., normal humans) could, by interbreeding, produce a new race with *two* minds—the human and the superhuman. (4) The concept of a true Earth exploratory spaceship with a crew of *thirty thousand* — and, of course, fantastic weapons and thigamijigs as well. (5) A plot involving such ordinary wonders as the complete atomic dissolution of human bodies and their perfect reconstitution by (believe it or not) a Machine!

Personally I love it all, but I don't think it's science fiction. It belongs to a special literature of the fantastic, which is, like the works of E. E. Smith, Ph.D., powered by just about the same psychodynamical motors as those which William Steig uses, in a satirical, not a romantic, way, in his famous Small Fry series, "Dreams of Glory." This is atomic-powered wish fulfillment!

All right, now that I know, I can relax and enjoy the stuff.

CLOAK OF AESIR by John W. Campbell, Jr. Shasta Publishers, Chicago, 1952. 255 *pages,* $3.00

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WHILE we are on the subject of science fantasy, let's take a look at the early "Don A. Stuart" stories by the editor of *Astounding Science Fiction*. Here is one of the true progenitors of van Vogt's special type of "impossible" science fiction. The book contains seven novelets, in all of which the Unlikely is defeated by the Impossible.

Seven stories—all beyond belief, all science fantasy, all somewhat overwritten, but still well done: you cannot very readily forget them.

The Machine series of three stories (like all the rest reprinted from *Astounding* during the late 30s and early 40s) is about a "Machine" that runs the world for mankind, but abandons it, leaving affairs in chaos, when it becomes obvious that Man is growing lazy and useless. Then the Alien Invaders ("Tharoo") take over what's left of Man and rule until some superscientific human rebels force them to move to Venus. Here is the optimistic theme of recivilizing that runs through most of the Stuart stories.

"Forgetfulness," a truly fine tale, finds Man so far advanced that he has forgotten such primitive techniques as atomic energy: he is *really* civilized.

The two Aesir stories deal with the Sarn matriarchy—aliens who are eventually defeated by a fantastic gadget that absorbs *all* energy.

Its temperature, according to its inventor, is an astonishing minus 55,000 degrees.

And so it goes: deeply appealing adult bedtime stories, in some instances actually productive of nice ideas (particularly "Forgetfulness"), but in general a little on the inenarrable (look it up in your unabridged) side of believability.

Of the seven items, only two ("Forgetfulness" and "The Machine") have previously been in science fiction collections.

TAKEOFF by Cyril M. Kornbluth. Doubleday & Co., New York, 1952. 218 pages, $2.75

IT'S impossible to review this item adequately without giving away the major plot gimmick. All I can say is that the tale is exciting; it grips your attention: it has a wonderful sense of reality, despite the essential implausibility of its major premise; and yet some parts are painfully possible in today's atmosphere of scientific secrecy. In some ways it is a rather daring parable of the left hand not knowing what the right hand doeth.

Briefly, the story (which is placed a modest few decades from now) deals with the secret

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manufacture of the first Moonship. Impossible? Who knows, when you think of the Manhattan Project? Of course, the frame of reference in which the ship is built here is unlikely, to say the least — and the screwy way in which the atomic fuel for the ship is developed is even more of a boff (as the "joy-poppers and main-liners"—see page 201 of this book) would put it.

On the other hand, in the process of telling itself the story has some diamond-pointed things to say about Security, Bureaucracy, Military Matters, Sex, Politics, and the Press.

A worthwhile addition to Doubleday's science fiction series — never before appearing in print, either in a magazine or elsewhere; and (for once) good enough to make one wonder why it wasn't serialized. All that extra money lost!

KRAKATIT: AN ATOMIC PHANTASY, by Karel Capek. Arts, Inc., New York, 1951. 294 *pages,* $2.50

KAREL Capek, the Czech writer who invented the word "robot" (in his play *R.U.R.* —"Rursum's Universal Robots") wrote this very curious item, the title of which is derived from the volcano Krakatoa, in the early Twenties. He undoubtedly intended it as a frantic plea against war.

This it still is, though a rather confused one.

But in addition (and this is why it is now reprinted) Capek also knew something about atomic physics. Consequently, he previsioned the atom bomb some 20 years before it happened. He certainly deserves a medal for this, too.

Capek also wrote an almost psychopathic book. It opens with a brilliant, frightening description of an attack of brain fever, in the person of Prokop, the hero — a simpleton full of power, an explosive prone, a sick genius. And a fool when it comes to women. Sex, brain fever—what else? Of course, a surrealist satire on power lusts in all sorts of people —clergymen, generals, princesses, businessmen.

After you have read and then sat back and considered it with care, *Krakatit* turns out to be a savagely pertinent book about the misuse of science. It is not particularly easy reading or particularly attractive, but it is damnably compelling.

—GROFF CONKLIN

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The Altruist

By JAMES H. SCHMITZ

When something disappears, there is always a reason. But it may be pleasanter to have the mystery than find out the explanation!

"I PUT them right there!" Colonel Olaf Magrumssen said aloud.

He was referring to his office scissors, with which he wanted to cut some string. The string, designed for official use, was almost unbreakably tough, and Colonel Magrumssen had wrapped one end of it around a package containing a set of reports of the Department of Metallurgy, which was to be dispatched immediately. The other end of the string led through a hole in the wall to an automatic feeder-spool somewhere behind the wall, and the scissors should have been on a small desk immediately under the point where the string emerged, because that was where the colonel always left them. Just now, however, they weren't there.

There wasn't anything else on the desk that they might have slipped behind; they weren't lying on the floor, and the desk had no drawers into which he could have put them by mistake. They were simply and inexplicably gone.

"Damn!" he said, holding the package in both hands and looking about helplessly. He was all alone in the Inner Sanctum which separated his residential quarters from the general office area of the Department of Metallurgy.

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ASHMAN

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The Sanctum, constructed along the lines of a bank vault, contained Metallurgy's secret files and a few simple devices connected with an automatic transportation system between Metallurgy and various other government departments. There was nothing around that would be useful in the present emergency.

"Miss Eaton!" the colonel bellowed, in some exasperation.

Miss Eaton appeared in the doorway a minute later, looking slightly anxious and slightly resentful, which was her normal expression. Otherwise, she was a very satisfactory secretary and general assistant to the colonel.

"Your scissors, Miss Eaton!" he ordered, holding up his package. "Kindly cut this string!"

MISS Eaton's gaze went past him to the desk, and her expression became more definitely resentful.

"Yes, sir," she said. She stepped up and, with a small pair of scissors attached by a decorative chain to her belt, cut the string.

"Thank you," said the colonel. "That will be all."

"There's a Notice of Transfer regarding Charles E. Watterly lying on your desk," Miss Eaton said. "You were to pass on it early this morning."

"I know." The colonel frowned. "You might get out Watterly's record for me, Miss Eaton."

"It's attached to the Notice of Transfer," Miss Eaton told him. She went out without waiting for a reply.

The colonel dropped the package into a depository that would dispatch it to its destination untouched by human hands, and turned to leave the Inner Sanctum. Still irritated by the disappearance, he glanced back at the desk.

And there the scissors were, just where he remembered having left them!

The colonel stopped short. "Eh?" he inquired incredulously, of no one in particular.

A long-forgotten childhood memory came chidingly into his mind . . .

"Lying right there!" a ghostly voice of the past was addressing him again. *"If it were a snake,"* the voice added severely, rubbing the lesson in, *"it would bite you!"*

The colonel picked up the scissors rather gingerly, as if they might bite him, at that. He looked surprised and alert now, all distracting annoyances forgotten.

Colonel Magrumssen was a logical man. Now that he thought back, there was no significant doubt in his mind that, the evening before, he had left those

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scissors on that desk. Nor that, after opening the Sanctum and sealing the package this morning, he had discovered they were gone.

Nor, of course, finally, that they now had returned again.

Those were facts. Another fact was that, aside from himself, nobody but Miss Eaton had entered the Inner Sanctum meanwhile—and she hadn't come anywhere near the desk.

Touching a sticky spot on one of the blades of the scissors, the colonel dabbed at it and noticed something attractively familiar about the pale brown gumminess on his finger.

He put the finger to his mouth. Why, certainly, he told himself—it's just taffy.

His mind paused a moment. *Just taffy!* it repeated.

Now wait a minute, the colonel thought helplessly.

One could put it this way, he decided: at some time last night or this morning, an Unseen Agency had borrowed his scissors for the apparent purpose of cutting taffy with them, and then had brought his scissors back . . .

PERHAPS it was the complete improbability of that explanation which made him want to accept it immediately. In the humdrum, hard-working decades following Earth's Hunger Years, Colonel Magrumssen had become a hobbyist of the Mysterious, and this was the most mysterious-looking occurrence he'd yet run into personally. He'd been trained in espionage during the last counter-revolution, and while the lack of further revolutions ultimately had placed him in an executive position in Metallurgy, his interests still lay in investigating the unexplained, the unpredictable, in human behavior, and elsewhere.

As a logical man, however, he realized he'd have to put in his customary day's work in Metallurgy before he could investigate the unusual behavior of a pair of office scissors.

He locked the double doors of the Inner Sanctum behind him—locked them, perhaps, with exceptional attention to the fact that they *were* being locked—and went into the outer offices, to decide on Charles E. Watterly's Notice of Transfer.

The Department of Metallurgy, this section of which was under Colonel Olaf Magrumssen's supervision, was as smoothly operating an organization as any government coordinator could want to see. So was every other major organization — the simple reason being that employees who couldn't meet the stiff requirements of governmental employment were dropped quietly and promptly into the worldwide

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labor pool known as Civilian General Duty. Once CGD swallowed you, it was rather difficult to get out again; and life at those levels was definitely unattractive.

Charles E. Watterly's standing in Metallurgy was borderline at best, the colonel decided after going briefly over his record—a rather incredible series of preposterous mistakes, blunders, slip-ups and oversights. Watterly's immediate superior had made up a Notice of Transfer as a matter of course and sent it along to the colonel's desk to be signed. Signing it would send Charles E. Watterly automatically to Civilian General Duty.

The colonel was a tolerant man. He didn't care a particular hang how the Department of Metallurgy fared, providing his own position wasn't threatened. But even colonels who failed to keep their subordinates in line could wind up doing Civilian General Duty.

He could afford to give the unfortunate Watterly one more chance, the colonel decided. A man who could operate so consistently against his own interests should be worth studying for a while! And since Watterly's superior had passed the buck by making out the Notice of Transfer, the colonel summoned Miss Eaton and instructed her to have Watterly placed on his personal staff, on probation.

Miss Eaton made no comment. The airtight organization which was beginning to haul humanity, uncomfortably and sometimes brutally enough, out of the catastrophic decline of the Hunger Years did not encourage comment on one's superior's decisions.

"Mr. John Brownson of Statistics is here to see you," she announced.

"THE two per cent Normal Loss," John Brownson, a personal assistant of the Minister of Statistics, informed Colonel Magrumssen presently, "has shown striking variations of late, locally. That's the situation in a nutshell. The check we're conducting in your department is of a purely routine nature."

He was relieved to hear that, the colonel said drily. What did Statistics make of these variations?

Brownson looked surprised.

"We've made nothing of them as yet," he admitted. "In time, we hope, somebody will." He paused and looked almost embarrassed. "Now in your department, we have localized one area of deviation so far. It happens to be the cafeteria."

The colonel stared. "The cafeteria?"

"The cafeteria," Brownson continued, flushing a trifle, "shows

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currently a steady point three increase over Normal Loss. Processed foodstuffs, of course, are so universally affected by the loss that almost any dispersal point can be used conveniently to check deviations. Similar changes are reported elsewhere in the capital area, indicating the possible development of a local trend . . ."

"Trend to what?" the colonel demanded.

Brownson shrugged thoughtfully. He wasn't; he pointed out, an analyst; he only produced the statistics.

"Well, never mind," said the colonel. "Our poor little cafeteria, eh? Let me know if anything else turns up, will you?"

Now that was an odd thing, he reflected, still idly, while he gazed after Brownson's retreating back. When you got right down to it, nobody actually seemed to know why there should be a two per cent untraceable loss in the annual manipulations of Earth's commodities! People like Brownson obviously saw nothing remarkable in it. To them, Normal Loss had the status of a natural law, and that was that.

Why, he realized, his reaction hovering somewhere between amusement and indignation, he'd been fooled into accepting that general viewpoint himself! He'd let himself be tricked into accepting a "natural law" which involved an element of the completely illogical, the inexplicable.

The colonel felt a flush of familiar excitement. Look, he thought, this could be—*why, this is big! Let's look at the facts!*

He did. And with that, almost instantly, a breathtakingly improbable but completely convincing explanation was there in his mind.

Furthermore, it tied in perfectly with the temporary disappearance of his office scissors that morning!

Colonel Magrumssen conceded, however, with something like awed delight at his own cleverness, that it was going to be a little difficult to prove anything.

THE problem suddenly had become too intriguing to put off entirely till evening, so the colonel sent Miss Eaton out to buy a bag of the best available taffy. And he himself made a trip to his private library in his living quarters and returned with a couple of books which had nothing to do with his official duties.

He proceeded to study them until Miss Eaton returned with the taffy, which he put in a drawer of his desk. Then, tapping the last page of the text he had been studying—the chapter was titled "Negative Hallucinations"—he reviewed the tentative con-

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clusions he'd formed so far.

The common starting point in the investigation of any unusual occurrence was to assume that nothing just occurred, that everything had a cause. The next step being, of course, the assumption that anything that happened was part of a greater pattern of events; and that if one got to see enough of it, the greater pattern generally made sense.

The mysterious disappearance and reappearance of his office scissors certainly seemed unusual enough. But when one tied it in with humanity's casual acceptance of the fact that some two per cent of Earth's processed commodities disappeared tracelessly every year, one might be getting a glimpse of a possible major pattern.

The colonel glanced back over a paragraph he had marked in "Negative Hallucinations":

> Negative hallucinations are comprehensive in the sense that they also negate the sensory registration of any facts that would contradict them. Install in a hypnotic subject the conviction that there is no one but himself in the room; he will demonstrate that he does not permit himself to realize that he cannot see when another person present places both hands over his eyes . . .

Assuming that it wasn't too logical of humanity to take Normal Loss for granted, one could conclude that humanity as a whole might be suffering from a very comprehensive negative hallucination — in which case, it wouldn't, of course, be permitting itself to wonder about Normal Loss!

It was a rather large assumption to make, the colonel admitted; but he might be in a position to test it now.

For one then could assume also that there was somebody around, some Unseen Agency, who was benefiting both by Normal Loss and by humanity's willingness to accept Normal Loss without further investigation.

An outfit who operated as smoothly as that shouldn't really have bungled matters by returning his scissors under such suspicious circumstances. But even that sort of outfit might be handicapped by occasional members who weren't quite up to par. Somebody, say, who was roughly the equivalent of a Charles E. Watterly.

The notion satisfied the colonel. He unlocked a desk drawer which contained a few items of personal interest to him. A gun, for one thing—in case life eventually turned out to be just a little too boring, or some higher-up decided some day that Colonel Magrumssen was ripe for a transfer and CGD. A methodical man should be prepared for any eventuality.

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Beside the gun, carefully wrapped, was a small crystal globe, a souvenir from a vacation trip he'd made to Africa some years before. There had been a brief personal romance involved with the trip and the globe; but that part of it no longer interested the colonel very much.

The thing about the globe right now was that, when one pressed down a little button set into its base, it demonstrated a gradual succession of tiny landscapes full of the African sunlight and with minute animals and people walking about in it. All very lifelike and arranged in such a manner that one seemed to be making a slow trip about the continent. It was an enormously expensive little gadget, but it might now be worth the price he'd paid for it.

The colonel wrapped the globe back up and set it on the desk next to the bag of taffy. Then he went about finishing up the day's official business, somewhat amazed at the fact that he seemed to be accepting his own preposterous theory as a simple truth — that invisible beings walked the Earth, lived among men and filched their sustenance from Man's meager living supplies . . .

But he hadn't, he found, the slightest desire to warn humanity against its parasites! That had nothing to do with the fact that nobody would believe him anyway. So far, he rather approved of the methods employed by the Unseen Agency.

By the time the next twenty-four hours were over, he also might have a fair idea of its purpose.

He laughed. The whole business was really outrageous. And he realized that, for some reason, that was just what delighted him about it.

HE was sitting in his study, shortly after nine o'clock that evening, when he had the first indication that his plans were beginning to work out.

Up till then, he had remained in a curiously relaxed frame of mind. Having accepted the apparent fact of the Unseen Agency's existence, the question was whether its mysterious powers went so far that it actually could read his thoughts and know what he intended to do before he got around to doing it. If it could, his tricks obviously weren't going to get him anywhere. If it couldn't, he should get results—eventually. He felt he lost nothing by trying.

He was aware of no particular surprise then when things began to happen. It was as if he had expected them to happen in just that way.

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He had pushed away the papers he was working on and leaned back to yawn and stretch for a moment. As if by accident, his gaze went to the mantel above the study's electronic fireplace, where he had placed the little crystal globe showing Africa's scenic wonders. He had left it switched to the picture of a burned brown desert, across which a troop of lean, pale antelopes trotted slowly toward a distant grove of palm trees.

From where he sat, he could see that the crystal no longer showed the desert view. Instead, Kilimanjaro's snow-covered peak was visible in it, reflecting the pink light of an infinitesimal morning sun.

The colonel frowned slightly, permitting a vague sense of disturbance—an awareness of something being not quite as it should be—to pass through his mind. Presumably, that awareness would reflect itself to some degree in his expression and might be noticed there by a sufficiently alert observer.

He dismissed the feeling and turned back to his papers.

What he caught in that moment, from the corner of his eye, couldn't exactly be described as motion. It was hardly more than a mental effect, a fleeting impression of shifting shadows, light and lines, as if something had alighted for an instant on the farthest edge of his vision and been withdrawn again.

The colonel didn't look up. A chill film of sweat covered the backs of his hands and his forehead. That was the only indication he gave, even to himself, of feeling any excitement. Without moving his eyes, he could tell that the gleaming crystal globe had vanished from its place on the mantel.

HOW did they do it? In some way, they were cutting off the links of awareness that existed between all rational human beings. They were broadcasting the impression that they, and the things they touched, and the traces of their activities did not exist. Once the mind accepted that, it would refuse to acknowledge any contradictory evidence offered by its senses of reasoning powers.

He'd started out by assuming that there *was* something there, so the effect of the negative hallucination was weakened in him. Every new advance in understanding he made now should continue to weaken it—and there was one moment when the Unseen Agency's concrete reality must manifest itself in a manner which his mind, at this point, couldn't refuse to accept. That was the instant in which it was

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manipulating some very concrete item, such as the crystal globe, in and out of visibility.

It was obvious, at any rate, that the Agency couldn't read his thoughts. He'd tricked it, precisely as he'd set out to do, into making a hurried attempt to resolve his apparently half-formed suspicion that someone might have been playing with the globe behind his back. It showed a certain innocence of mind. But, presumably, people who had such unusual powers mightn't be accustomed to the sort of devious maneuvering and conscious control of emotion and thought which was required to survive at an acceptable level in the colonel's everyday world.

He became aware suddenly of the fact that the crystal globe had been returned to its place on the mantel. For that same instant, he was aware also of a child-shape, definitely a girl, standing on tiptoe before the mantel, still reaching up toward the globe — and then fading quickly, soundlessly, beyond the reach of his senses again.

That was considerably more than enough—

He'd been thinking of some super-powered moron, of the Charles E. Watterly type, not a child! But it made even better sense this way, and it took only a few seconds of flexibility to adapt his plans to include the new factor.

THE colonel took two white cards and a lead pencil out of a drawer of the desk at which he was working. He unhurriedly printed three words on the first card and five on the second. Putting the cards into his pocket, he finally looked up at the globe.

As he expected, it showed the scene he'd last been studying himself—brown desert, the grove of palms and the antelopes.

He gazed at it for a moment, as if absently accepting this correction of the Unseen Agency's lapse as any good hypnotic subject should. And then, still casually, he took the bag of fresh taffy he'd had Miss Eaton buy that afternoon out of the desk drawer. He opened it, opening his mind simultaneously to the conviction that the child-shape would come now to this new bait.

Almost instantly, he realized, with a sense of sheer delight, that she *was* there!

At any rate, there was an eagerness, an innocent greed, swirling like a gusty, soundless little wind of emotion about him, barely checked now by the necessity of remaining unseen. He took out a piece of the taffy and popped it solemnly into his mouth, and the greed turned into a shivering young rage of frus-

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tration, and a plea, and a prayer: *Oh, make him look away! Just once!*

The colonel put the paper bag into his pocket, walked deliberately to the mantel and propped one of the two cards up against the globe.

There was a fresh upsurge of interest, and then an almost physically violent burst of other emotions behind him.

For the three words on the card read:

I SAW YOU!

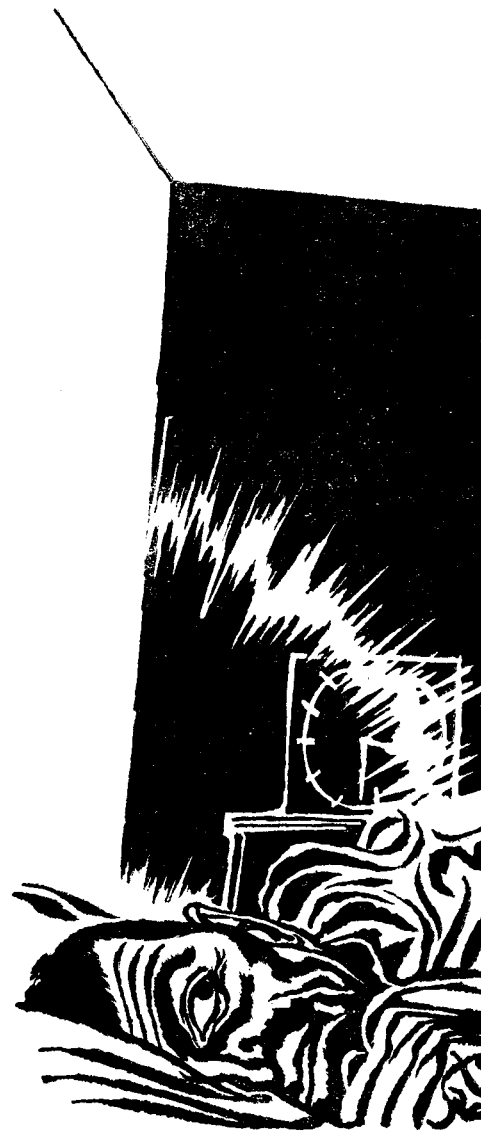
Whistling soundlessly, the colonel waited a moment and replaced that card with the next one. He scratched his jaw and, as an apparent second thought, produced three pieces of taffy from his pocket, which he arranged into an artistic little pyramid in front of the card. He turned and walked back to his desk.

When he looked around from there, the card was gone.

So were the three pieces of taffy.

He waited patiently for over a minute. Something white fluttered momentarily before the globe on the mantel and the card had reappeared. For a moment again, too, the child became visible, looking at him still half in alarm, but also half in laughter now, and then vanished once more.

Reading what was written on



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the card, the colonel knew he'd won the first round anyway. His reaction wasn't the feeling of alert, cautious triumph he'd expected, but a curious, rather unaccountable happiness.

The five words he'd printed on the card had been:

DON'T WORRY—I WON'T TELL

That message was crossed out now with pencil. Underneath it, two single words had been printed in a ragged slope, as if someone had been writing very hurriedly:

THANK YOU!

BY two o'clock that night, the colonel was still wide awake, though he had followed his methodical pattern of living by going to bed at midnight, as usual. Whatever the Unseen Agency's reaction might be, it wouldn't be bound by any conventional restrictions.

There was the chance, of course, that they would decide it was necessary to destroy him. Since he couldn't protect himself successfully against invisible opponents, the colonel wasn't taking any measures along that line. He'd accepted the chance in bringing himself to their attention.

They also might decide simply to ignore him. He couldn't, he conceded, do much about it if they did. Everyday humanity had its own abrupt methods of

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dealing with anyone who tried to dispel its illusions, and he, for one, knew enough not to make any such attempt. But the Unseen Agency should have curiosity enough to find out how much he actually knew and what he intended to do about it. . . .

His eyes opened slowly. The luminous dial of the clock beside his bed indicated it was three-thirty. He had fallen asleep finally; and now there were—presences—in his room.

After his first involuntary start, the colonel was careful not to move. The channels of awareness that had warned of the arrival of the Unseen Agency seemed to be approximately the same he had used unwittingly in sensing the emotions of the child earlier that night. Under the circumstances, he might regard them as more reliable than his eyes or ears.

Apparently encouraged by his acceptance of the fact, his mind reported promptly that the child herself was among those present—and that there was a new quality of stillness and expectancy about her now, as if this were a very important event to her, too.

Of the others, the colonel grew aware more gradually. But as he did, he discovered the same sense of waiting expectancy about them, almost as if they were trying to tell him that the next move actually was up to him, not them. In the instant he formed that conclusion, his feeling of their general presence seemed to resolve itself into the recognition of a number of distinct personalities who were presenting themselves to him, one by one.

The first was a grave, aged kindliness, but with a bubble of humor in it—almost, he thought, surprised, like somebody's grandmother!

Two and Three seemed to be masculine, darker, thoughtfully judging.

And, finally, there was Four, who appeared to come into the room only now, as if summoned from a distance to see what her friends had found—a personality as clear and light as the child's, but an adult intelligence nevertheless. Four joined the others, observant and waiting.

Waiting for what?

That, the colonel gathered, was for him to experience in himself and understand. His awareness of their existence had been enough to attract their attention to him. Moving and living securely beyond the apparent realities of civilization, as if it were so much stage scenery which had hypnotized the senses of all ordinary human beings, they seemed ready to welcome and encourage any discoverer, without fear or hostility, as one of themselves.

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He could sense dimly the quality of their strange ability, and the motives that had created it. The ruthless mechanical rigidity of the human society that had developed out of the Hunger Years had been the forcing factor. These curious rebels must have felt a terrible necessity to escape from it to have found and developed in their own minds a means of bypassing society so completely—the means being, essentially, so perfect a control of the outgoing radiations of thought and emotion that they created no slightest telltale ripple in the ocean of the subconscious human mind and left a negative impression there instead.

But they were not hiding from anyone who followed the same path they had taken.

There was a sudden unwillingness in him to go any further in that direction at the moment. Full understanding might lie in the very near future; but it was still in the future.

As if they had accepted that, too, he could sense that the members of the Unseen Agency were withdrawing from him and the room. Four was last to go, lingering a moment after the others had left, as if looking back at him; a light, clear presence as definite as spoken words or the touch of a hand.

A moment after she had left, the colonel realized, with something of a shock, that for the first time in his adult life, he had fallen in love. . . .

FIRST thing he did next morning was to have himself measured for a new uniform of the kind he'd always avoided—the full uniform of his rank, white and gold, and with the extra little flourishes, the special unauthorized richness of cloth that only a colonel-and-up could afford or get away with. It was the sort of gesture, he felt, that Four might appreciate. And he had a reason for wanting to stay away from Metallurgy that morning for the four hours or so it might take to complete the suit.

He was in the position of a strategist who, having made an important gain, can take time out to consolidate it and consider his next moves. He preferred to do that beyond the range of any too observant eyes—and mind.

That Four and her kind should be content to live — well, like mice, actually—behind the scenery of the world, subsisting on the crumbs of civilization, was ridiculous. They seemed to have no real understanding of their powers, and of the uses to which they could be put.

It was the most curious sort of paradox.

The colonel found a park bench

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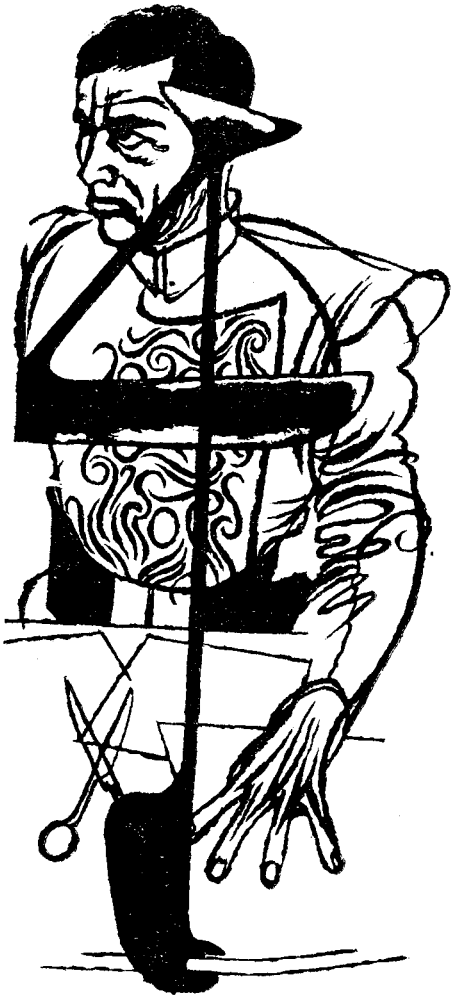

and settled down to investigate the problems presented by the paradox.

He was, he decided, a practical man. As such, he'd remained occluded, till now, to their solution of the problems of a society with which he was basically no more contented than they had been. But he had adjusted effectively to the requirements of that society, while they had withdrawn from it in the completest possible fashion this side of suicide.

To put it somewhat differently, he had learned how to influence and manipulate others to gain for himself a position comfortably near the top. *They* had learned how to avoid being manipulated.

But if a man could do that—without losing the will to employ his powers intelligently!

The colonel checked the surge of excitement which arose from that line of reflection, almost guiltily. The structure of society might be—and was—more than ripe for an overhauling. But he was quite certain that Four's people would not be willing to follow his reasoning just yet. Their whole philosophy of living was oriented in the opposite direction of ultimate withdrawal.

But give me time, he thought. *Just give me time!*

Four showed herself to him that afternoon.

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He'd returned to his office—the white-and-gold uniform had created a noticeable stir in the department—and instructed Miss Eaton to send someone out for a lunch tray from the cafeteria.

A little later, he suddenly realized that Four was standing in the door of the office behind him. He knew then that, for some reason, he had expected her to come.

He was careful not to look around, but he sensed that she both approved of the white uniform and was laughing at him for having put it on to impress her. The colonel's ears reddened slightly. He straightened his shoulders, though, and went on working.

Next, the child-shape slipped by before his desk, an almost visibility. He glanced up at it, and it smiled and disappeared as abruptly as if it had gone through a door in mid-air and closed the door behind it. A moment later, Four stood just beyond the desk, looking down at the colonel, no less substantial than the material of the desk itself.

He stared up at her, unable to speak, aware only of a slow, strong gladness welling up in him.

Then Four vanished—

Someone had opened the door of the office behind him.

"Your lunch, sir," the familiar voice of Charles E. Watterly muttered apologetically.

The colonel let his breath out slowly. But it didn't matter too much, he supposed. Four would be back.

"Thank you, Watterly," he said, with some restraint. "Set it down, please."

Watterly's angular shape appeared beside him and suddenly seemed to teeter uncertainly. The colonel moved an instant too late. The coffee pot lay on its side in the brown puddle that filled the lunch tray on the desk. The rest of the contents were about evenly distributed over the desk, the carpet, and the white uniform.

On his feet, flushed and angry, the colonel looked at Watterly.

"I'm sorry, sir!" Watterly had fallen back a step.

Now, *this* was interesting, the colonel decided, studying him carefully. This was the familiar startled white face, its slack mouth twisted into an equally familiar, frightened grin. But why hadn't he ever before noticed the incredible, cold, hidden malice staring at him out of those pale blue eyes?

Not a bungler. A hater. The airtight organization of society kept it suppressed so well that he had almost forgotten how the underdogs of the world could hate!

He let the rage in him ebb away.

Anger was pointless. It was

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the compliment one paid an equal. To withdraw beyond the reach of human malice, as Four and the rest of them had done, was a better way—for the weak. For those who were not, the simplest and most effective way was to dispose of the malicious by whichever methods were handiest, and forget about them.

AT seven in the evening, Miss Eaton looked in at the colonel's central office and inquired whether he would need her any more that day.

"No, thank you, Miss Eaton," said the colonel, without looking up. "A few matters I want to finish by myself. Good night."

There was silence for a moment. Then Miss Eaton's voice blurted suddenly, "Sometimes it's much better to finish such matters in the morning, sir!"

The colonel glanced up in surprise. Coming from Miss Eaton, the remark seemed out of character. But she looked slightly resentful, slightly anxious, as always, and not as if she attributed any importance to her words.

"Well, Miss Eaton," the colonel said genially, while he wondered whether it had been a coincidence, "I just happen to prefer not to wait till tomorrow."

Miss Eaton nodded, as though agreeing that, in that case, there was no more to be said. He listened to her heels clicking away through the glass-enclosed aisles of the general offices, and then the lights went out there, and Colonel Magrumssen was sitting alone at his desk.

It was odd about Miss Eaton. He was almost certain now it had been no coincidence. Her personality which, for a number of years, he'd felt he understood better than one got to understand most people, had revealed itself in a single sentence to be an entirely different sort of personality—a woman, in fact, about whom he knew exactly nothing! At any other time, the implications would have fascinated him. Tonight, of course, it made no difference any more.

His gaze returned reflectively to a copy of the Notice of Transfer by which Charles E. Watterly had been removed from Metallurgy some hours before, to be returned to the substratum of Earth's underdogs, where he obviously belonged.

It had seemed the logical thing to do, the colonel realized with a feeling of baffled resentment. What did one more third-rate human life among a few billions matter?

But it seemed his unseen acquaintances believed it did matter, very much. Somewhere deep in his mind, ever since he had signed the Transfer, a cold, dead

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area had been growing which told him, as clearly as if they had announced it in so many words, that he wouldn't be able to contact them again.

Notices of Transfer weren't revocable, but he felt, too, that it wouldn't have done him much good if they had been. One committed the unforgivable sin, and that was that.

He had pushed Watterly back down where he belonged. And he was no longer acceptable.

There was one question he would have liked answered, the colonel decided, as he went on methodically about the business of cleaning up his department's top-level affairs for his successor.

What, actually, *was* the unforgivable sin?

A half hour later, he decided he wasn't able to find the answer. Something involved with Christian charity, or the lack of it, apparently. He had sinned in degrading Watterly. Civilization similarly had sinned on a very large scale against the major part of humanity. And so they had withdrawn themselves both from civilization and from him.

He shook his head. He might still be misjudging their motives —because it still didn't seem quite right!

On the proper form and in a neat, clear hand, he filled out his resignation from Metallurgy and from life, to make it easy for the investigators. He frowned at the line headed REASONS GIVEN and decided to leave it blank.

He laid down the pen and picked up the gun and squinted down its barrel distastefully. And then somebody who now appeared to be sitting in the chair on the other side of his desk remarked:

"That mightn't be required, you know."

THE colonel put the gun down and folded his hands on the desk. "Well, John Brownson!" he said, politely surprised. "You're one of them, too?"

The assistant to the Minister of Statistics shrugged.

"In a sense," he admitted. "In about the same way that you're one of them."

The colonel thought that over and acknowledged that he didn't quite follow.

"It's very simple," Brownson assured him, "once you understand the basic fact that we're all basically altruists—you and I and every other human being on Earth."

"All altruists, eh?" the colonel repeated doubtfully.

"Not, of course, always consciously. But each of us seems to know instinctively that he or she is also, to some extent, an irrational and therefore potentially

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dangerous animal. The race is developing mentally and emotionally, but it hasn't developed as far as would be desirable as yet."

"That, at any rate, seems to be a fact," the colonel conceded.

"So there is a conflict between our altruism and our irrationality. To solve it, we—each of us—limit ourselves. We do not let our understanding and abilities develop beyond the point at which we can trust ourselves not to use them against humanity. Once you accept that, everything else is self-explanatory."

Now how could Brownson hope to defend such a statement, the colonel protested after an astonished pause, after taking a look at history? Or, for that matter, at some of the more outstanding public personalities in their immediate environment?

But the assistant to the Minister of Statistics waved the objection aside.

"Growth isn't always a comfortable process," he said. "Even the Hunger Years and our present social structure might be regarded as forcing factors. The men who appear primarily responsible for this stage of mankind's development may not consciously look on themselves as altruists, but basically, as I said, that is the only standard by which we do judge our activities —and ourselves! Now, as for you—"

"Yes?" said the colonel. "As for me?"

"Well, you're a rather remarkable man, Colonel Magrumssen. You certainly gave every indication of being prepared to expand your understanding to a very unusual degree—which was why," John Brownson added, somewhat apologetically, "I first directed your attention to the possible implications of Normal Loss. Afterward, you appear to have fooled much more careful judges of human nature than I am. Though, of course," he concluded, "you may not *really* have fooled them. It's not always easy to follow their reasoning."

"Since you're being so informative," the colonel said bluntly, "I'd like to know just who and what those people are."

"They're obviously people who can and do trust themselves *very* far," Brownson said evasively. "A class or two above me, I'm afraid. I don't know much about them otherwise, and I'd just as soon not. You're a bolder man than I am, Colonel. In particular, I don't know anything about the specific group with which you became acquainted."

"We didn't stay acquainted very long."

"Well, you wouldn't," Brownson agreed, studying him curi-

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ously. "Still, it was an unusual achievement."

THE colonel said nothing for a moment. He was experiencing again a hot resentment and what he realized might be a rather childish degree of hurt, and also the feeling that something splendidly worthwhile had become irretrievably lost to him through a single mistake. But, for some reason, the feeling was much less disturbing now.

"The way it seemed to me," he said finally, "was that they were willing to accept me as an equal —whatever class they're in—until I fired Watterly. That wasn't it, then?"

"No, it wasn't. They were merely acknowledging that you had acepted yourself as being in that class, at least temporarily. That seems to be the only real requirement."

"If I knew instinctively that I couldn't meet that requirement, on a completely altruistic basis," the colonel said carefully, "why did I accept myself as being in their class even temporarily?"

John Brownson glanced reluctantly at the gun on the desk. For a moment, the colonel was puzzled. Then he grinned apologetically.

"Well, yes, that might explain it," he admitted. "I believe I've had it in mind for some time. Life had begun to look pretty uninteresting." He poked frowningly at the gun. "So it was just a matter of satisfying my curiosity —first?"

"I wouldn't know what your exact motive was," Brownson said cautiously. "But I presume it went beyond simple curiosity."

"Well, supposing now," said the colonel, tapping the gun, "that on considering what you've told me, I decided to change my mind."

Brownson smiled. "If you change your decision, you'll do it for good and sufficient reasons. I'd be very happy — and, incidentally, there's no need to blame yourself for Watterly. Watterly knew he couldn't trust himself in any position above Civilian General Duty. If you hadn't had him sent back there, he would have found someone else to do it. Self-judgment works at all levels."

"I wasn't worrying much about Watterly," the colonel said. He reflected a moment. "What actually induced you to come here to talk to me?"

"Well," said Brownson carefully, "there was one who expressed an opinion about you so strongly that it couldn't be ignored. I was sent to make sure you had the fullest possible understanding of what you were doing."

The colonel stared. "Who ex-

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pressed an opinion about me?"

"Your Miss Eaton."

"MISS Eaton?" The colonel almost laughed. For a moment, he'd had a wild, irrational hope that Four had showed concern about him. But Four hardly would have been obliged to go to John Brownson for help.

"Miss Eaton," Brownson smiled wryly, "has a wider range of understanding than most, but not enough courage to do anything about what she knows. The bravest thing she ever did was to speak to you as she did tonight. After that, she didn't know what else to do, so—well, she prayed. At any rate, it seemed to be a prayer to her."

"For me?"

"Yes, for you."

"Think of that!" said the colonel, astonished. "That was why you came?"

"That's it."

The colonel thought about Miss Eaton for a moment, and then of what a completely fascinating, interesting world it was—if one could only become really aware of it. It seemed unreasonable that people should be going through life in blind, uneasy dissatisfaction, never quite realizing what was going on around and behind them. . . .

Of course, a good percentage of them might drop dead in sheer fright if they ever got a sudden inkling of what was there. For one thing, quiet power enough to extinguish nine-tenths of the human life on Earth between one second and the next.

And the thought of that power and various perhaps not too rational manipulations of it, he reflected truthfully, might have been the really fascinating part of it all to him.

"Well, thank you, Brownson," he said.

There was no answer.

WHEN the colonel looked up, the chair on the other side of the desk was empty. Brownson seemed to have realized that he'd done the best he could. The others, being wiser, would have known all along there was nothing to be done. His self-judgment stood.

"Damn saints!" the colonel said, grinning. The trouble was that he still liked them.

Trying not to think of Four again, he picked up the gun and then a final thought came to him. He laid it down long enough to write neatly and clearly behind REASONS GIVEN on the resignation form: IF IT WERE A SNAKE, IT WOULD BITE YOU!

A slim hand moved the gun away and a light voice laughed at the inscrutable message he had written. Then his own hand was

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taken and he smiled back at Four, while the room stayed substantial and he did not.

It was remarkable how easily and completely one could retreat from the world, clear to the point of invisibility. There had always been people like that, people who could lose themselves in a crowd or be totally unnoticeable at a party. They just hadn't carried their self-effacement far enough. Probably the pressure of reality hadn't been as savage as it was now, to compel both extremes of assertion and withdrawal.

Normal Loss would rise an infinitesimal amount, the colonel thought with amusement—he'd have to live, too. The world wouldn't know why, of course.

The devil with this world. He had his own to go to, and a woman of his own to go with.

"You didn't really think I was going to kill myself, did you?" he asked Four, feeling the need to make her understand and respect him. "It was only a trick to get your attention."

"As if you had to," she laughed tenderly.

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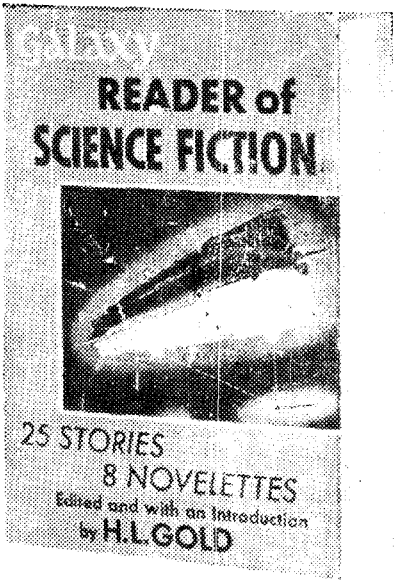

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